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ADDRESS.

PRESIDENT'S ADDRESS.

Delivered before the American Medical Association at the Forty-fifth Annual Meeting held at San Francisco, June 5, 1894.

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RICHMOND, IND.

Members of the American Medical Association:

A year ago in the great city of Milwaukee, on the shore of the inland sea, it was my privilege to express my surprise and to offer my thanks to the members of the AMERICAN MEDICAL ASSOCIATION for the distinguished honor conferred by elevating me to the Presidency of this paramount Medical Society of the United States, and to-day, in the greater city of San Francisco, within sound of the surf on the eastern shore of the wide Pacific Ocean, I rise to iterate the expression of my appreciation of the honor bestowed and again to extend thanks therefor.

We are assembled here this morning to open the forty-fifth annual meeting and celebrate the forty-seventh anniversary of the organization of the American Medical Association; to continue the noble work it has successfully prosecuted all the years of its existence; to commune professionally and declare the progress of medicine during the association year just ending; to fulfil the service of the present Association program and to arrange for a fresh one for our successors; to greet old friends and to make new acquaintances. And we come to our duty this morning with buoyant spirits, invigorated by the inspiring scenery we have traversed since leaving our homes, our stay here made prospectively profitable by the scientific menu our program presents, and our social and scenic enjoyment of richest promise through the thoughtful labor and esthetic taste of our efficient Committee of Arrangements, the nature and extent of which has just been rehearsed by its Chairman.

We are not here at the time nominated at Milwaukee. Soon after the adjournment last year, the statement was made that if the meeting this year should be held on May 1, as ordered, time would not be offered State societies to act on the question of the revision of the Code of Ethics as has been recommended by the Association, and change of the date of this meeting was suggested. This sentiment increased and other reasons for the change were added. The pressure growing stronger and more urgent, conferences were held in Washington during the session of the Pan-American Medical Congress. Many consultations were held at other times and places, and much correspondence was had without finding any opposition to the change and accordingly it was made, and published in the JOURNAL of the Association, Nov. 11, 1893.

At every annual meeting the officers of the Association, particularly the Permanent Secretary and the Treasurer, have difficulty in appeasing delegates who are not received because the credentials presented by them have not been issued by a society entitled to representation in the Association. The law regulating this matter is plain, to-wit: "The delegates shall receive their appointment from permanently organized State medical societies, and such county and district medical societies as are recognized *by representation* in their respective State societies."

The difficulty lies in the fact that some of the State societies are not representative bodies, and consequently this constitutional provision cuts off all delegates from such States except those commissioned by the State society itself. While this is the letter of the law it is not the spirit that animates the organization of the Association. The Constitution should be revised in this particular at least. There are two ways of overcoming the trouble: 1, strike out the words, "representation in" from the Constitution where it prescribes the qualifications of delegates, leaving all such county and district medical societies as are recognized by their respective State societies fully authorized to commission delegates to this Association. The other and better plan would be for every county society in each State to be represented in its State society. Facile methods of accomplishing this can readily be selected; perhaps the plan of organization so long in successful and satisfactory operation in Indiana might serve as a paradigm. There each county has its society, known by the name of the county, and the State society is composed of all the members of all the county societies. Annually each county society selects delegates to the State society, and at the same time nominate delegates to the American Medical Association who are commissioned by the State society. This simple plan secures substantial autonomy to the county societies and provides for equal representation to the Association from every part of the State. Every member of every county society can attend the meetings of the State society and participate in all business except voting. This seems to me both theoretically and practically adapted to a complete organization of the profession in every part of the Union, and if this Association at this session would formulate a scheme similar in spirit and in terms and recommend it to the consideration of such State societies as do not now have an equally serviceable organization, it would in my judgment be doing a good work, sowing seed that would bring forth sound fruit in the future. In Indiana the State society and each county society is a legal corporation, and while this is not essential to its method of organization of the profession of the State, it is to my mind desirable.

In this connection I desire to lay before you some thoughts touching the arrangement of subordinate medical societies in their relation to the American Medical Association. Every medical man who belongs to any medical society should belong to a

county, or an equivalent medical society, and every member of a county society should be *ipso facto* a member of his State society, and this an *open sesame* to the American Medical Association. By this arrangement all reputable physicians in the United States would be brought together in a common guild, whose power to do good within its legitimate sphere would be limited only by its aggregate wit and energy. Such a consummation would place this Association in a position to fulfill the mission hopefully anticipated for it by its earnest and patriotic founders, and would elevate the American profession to a plane for useful work the highest conceivable for the disciples of scientific medicine.

This would in no wise interfere with the organization of medical men devoted to special lines of practice or investigation; indeed the more of these, and the more special their fields of labor and inquiry, the more rapid will be the development of medical knowledge, the nearer will expert art approach to perfection and the greater will be the blessing to humankind. In these special and limited societies there will be a concentration of thought and labor that will yield results advanced and true to a degree beyond hope from a more promiscuous assembly.

All the adherents of the special organizations will be members of county societies and thereby of their respective State societies, whence, for the asking, they can step through the portals of this Association and find in our Sections a department already organized and at work into which they can enter, each according to his tastes or qualifications, and feel at home among fellow laborers.

A member of either of these special organizations entering the appropriate Section will find himself in the midst of all the members of the Association whose tastes run parallel with his own, whether specialist or general practitioner, and it is this mingling of these sundry classes of investigators and practitioners, exchanging views and detailing experience, that creates the vast stores of profit and pleasure so much enjoyed at our annual meetings. In this scheme for the organization of the American medical profession is there not promise enough to make us hope and labor for its early consummation?

A sentiment was expressed last year at Milwaukee by a member and has, I think, some currency among other members, that indicated a misconception of the character and *personnel* of the Sections as I view them. The sentiment was uttered in a private discussion of the propriety of conferring on the Business Committee the functions of the Nominating Committee, and was substantially this: My colloquist said: "The Business Committee is made up of ex-chairmen of Sections; the Sections are in the hands of specialists; the specialists reside in the greater cities and consequently the Business Committee will be constituted of special practitioners who hail from the greater cities, and some of the cities are great enough to furnish half a dozen chairmen at once. This will not only exclude general practitioners from a voice in the selection of officers of the Association, but may by chance or design place the general business of the Association under the management of specialists from a few of the more important cities of the country." The error of this representation lies in the fact that its entertainers fail to recognize that the aggregate membership of the Sections at each annual session is the total membership of the Association in attendance. True, in each Section there will be members of the special society whose work is the same as that to which the Section is devoted, and there will be others whose engagements are limited to the same line of practice, but these combined, except in two or three Sections, will not number more than a small minority, probably not a tenth, of those enrolled in the Section; the other nine-tenths will be general practitioners whose professional proclivities have directed them to the Section, and these general practitioners have the power by their votes, the right by virtue of their membership, and the obligation under their duty to the Association, to elect the best man in the Section to its chairmanship without inquiry whether he lives in a big city, a little city or a hamlet, and in so doing will make it patent to every thoughtful mind that the *personnel* of the Business Committee will be selected under conditions to insure as intelligent, as well distributed, and trustworthy a committee as the Association can secure. And moreover the function of a nominating committee is to nominate, not elect; confirmation or substitution is in the authority of, and always exercised by the Association. I am led to present this subject in this light and to this extent, because I feel that a majority of the members recognize the imperfections of our present mode of selecting the Nominating Committee, and realize that the welfare of the Association calls for a committee which has elements of permanence in its organization and whose *personnel* has been selected with something of deliberation.

When Dr. Geo. M. Sternberg was appointed Surgeon-General of the Army in May last, he made two innovations in the administration of the affairs of the office: 1, in establishing an Army Medical School to give passed candidates for appointment to the Army, laboratory practice in bacteriology, sanitary chemistry and other essential instructions for military service; 2, the position of attending surgeon in cities having good facilities for medical improvement be filled with young men who are preparing for promotion.

These changes did an excellent work that was accomplished without additional expense to the Government; the Museum and Library Building furnished the rooms, and the medical officers on duty in Washington did the teaching in addition to their regular work. But the number of active young surgeons about Washington and other cities attracted observation, and led the Chairman of the Committee on Military Affairs to conclude there was a surplus of Assistant Surgeons, and in his report to the House he reduced the number from 125 to 90, thus inhibiting fresh appointments until the number shall be reduced. This recommendation has passed the House, and if it should be approved by the Senate will greatly embarrass the medical service of the Army, and in the end be a serious detriment to the country, because many military posts will have to depend on civil physicians for medical attendance, and in case of war these would not take the field, and the Army would be without trained medical officers, which would be as serious an evil as unskilled officers in any other department. When these facts were pointed out to the Chairman of the Committee by other members with better knowledge of practical military affairs, the Chairman replied that no one outside the Army surgeons had complained, not a single medical society had claimed that any injury would result. Let the American Medical Association at once call

the attention of Congress to the mistake threatened.

Many of you may remember that the last Congress of the United States was about to refuse an appropriation to continue and complete the publication of the Index Catalogue of the Library of the Surgeon-General's office, the venerable Chairman of the House Appropriation Committee alleging that the medical fraternity were demanding too much, in fact had already received more than the lawyers or any other professional guild. This state of affairs becoming a matter of common fame, some physicians interested their representatives in the House by presenting to them the true state of affairs, with the result of a concerted effort being made in the House to enlighten the assembly to the extent of convincing the members that this was not an appropriation for the benefit of medical men, but to complete a great educational work for the benefit of the whole people, the doctors' relation to it being that they must do the work because no other class of men were trained to the service. The appropriation was saved and the catalogue is nearing completion.

But there is still a point in connection with the appropriation for the Library that needs attention, that can probably be better given by this Association than otherwise, and that is the restoration of a part of the appropriation for the support of the Library which was dropped by the last Congress, and the cut continued in the military bill before the present House. For twelve years the appropriation was $10,000, but the last Congress reduced it to $7,000, and the present Congress proposes to continue the reduction. Doubtless most Congressmen, and possibly some physicians, regard the Library of the Surgeon-General's office as an ordinary department library intended mainly for the use of the medical officers of the Army, but in truth it is the National Medical Library, open to, and used by, physicians from all parts of the country, and the possibility of finding at one place in this country the greater part of the literature on any medical subject has exercised a powerful influence on American medical literature and education.

The Library aims to obtain every medical book, periodical and report published in any country or language as soon as possible after it is issued, and have it at once catalogued and indexed and made available for use. This requires about $7,500 annually. There are still between twenty and thirty thousand volumes of medical books, published years ago, required to complete its equipment to meet all calls made upon it. These volumes are out of print and only to be had from second-hand booksellers and auction sales as opportunity offers, and will involve say $2,500 spent annually for perhaps ten years. Does not this condition of the Library and its support make a demand on this Association for aid, either as an organization or through the influence of its individual members on their respective members of Congress?

The desirability of supervision of public health by the general government has been recognized by this Association for many years and manifested in various ways. Four years ago a committee with Dr. C. G. Comegys, chairman, was appointed to prepare a bill, and petition Congress on behalf of the Association to establish a Department of Public Health with a Secretary for its chief who should be a member of the President's Cabinet. This committee has done much earnest work, drafted a bill and presented it to Congress, devoted labor and time personally to its advocacy before committees and members of Congress. The committee has been continued, somewhat modified, and has reported annually to the Association and will present an interesting report to this meeting to which I invite your thoughtful attention. Last year the Association appointed another committee with Dr. U. O. B. Wingate as chairman, to consult with a like committee of the American Public Health Association which has for several years been engaged in an effort to induce Congress to enact a law placing the supervision of the public health in charge of the general government. This committee will also submit a report for your consideration.

Other organizations have likewise entered Congress with petitions asking that the general government be clothed with authority to execute such measures as to assist in protecting public health. Much good may be anticipated from the attention these several sanitary organizations will excite, both in the congressional and public mind, and I doubt not that when the agitation has accomplished the valuable result of cultivating a knowledge of what is essential to the public welfare it will lead to a union of effort on the part of all workers that will insure satisfactory results.

My interest in the premises is such that during the year I have sought through personal intercourse and a wide range of correspondence to ferret out the best plan for supervision of public health that we can hope to have Congress crystallize into a working law. Without rehearsing details, I feel free to declare my conviction that enough has been ascertained of the sentiment of the Executive and Legislative Department of the Government to rob us of all hope of the establishment of a Department of Public Health within the remainder of the nineteenth century.

A Bureau of Public Health with a Commissioner as its chief, within one of the existing Departments of the Government was apparently within reach of a united, harmonious, aggressive effort of the profession for a year or two previous to the enlargement of the power of the Marine-Hospital service by the last preceding Congress, but the excellent work of that service at home and abroad since its increase of authority and means, has lessened the anxiety of the Government and the apprehension of the public in such degree as to make those in power less attentive to appeals to do what should yet be accomplished.

The outlook at this time for securing a Bureau of Public Health during this session of Congress is not encouraging, but if the problems in silver, tariff and national revenue should be speedily and satisfactorily solved there might appear a ray of hope for a Bureau within the life of the present Congress, provided the medical and sanitary professions would make common and joint effort in demanding it.

At present there is no measure formulated in this behalf so worthy of support as the New York Academy bill now in the hands of Congress, and in making this declaration I by no means ignore the fact that strong opposition to that bill has been made by strong men; I well know that no important measure like that can be inaugurated without challenging adverse criticism, but my abiding faith in the fitness

of sanitary human nature for great things is such that I harbor no doubt that if the opposition to this bill present a better than it, its friends will accept, and if this bill sustains its present status under severest scrutiny, its opponents will join in urging its enactment into a law and thereby vindicate characters at once wise and patriotic.

While a century of experience has convinced the great body of intelligent people that vaccination is the true and only prophylactic for smallpox, it has not carried conviction to the extent its merits deserve and the welfare of the people demands. The causes of this are not difficult to discern; vaccination and other forms of sanitation have prevented a visitation of the epidemic of smallpox in this country for a generation and the people have lost the fear of its contagion through ignorance of its nature while progressing, and its sequels if its victims survive. Add to this the disorders that sometimes follow the insertion of pure vaccine in a cachectic system and the greater evils arising from the use of spurious or imperfect vaccine and careless vaccination, all open to the observation of the public and subject to amplification by cranks and the maliciously ignorant, and we can not marvel that there is a positive distaste for vaccination among a considerable portion of our population, and a carelessness about securing it on the part of a much larger number. A knowledge of these facts should only inspire physicians and other sanitarians who are the custodians of the knowledge of the value of vaccination to protect from smallpox, as much so as smallpox itself, and that with pure vaccine inserted under proper conditions into the tissues of a person fit to receive it there is positively no shadow of evil, but a promise of good not surpassed by any other single measure of preventive medicine.

Evidence accumulates that the undetermined conditions that conduce to the propagation of smallpox are now, and for at least two years have been, prevalent in this country, resulting in outbreaks of the disease more or less serious in various parts of the country and too often leaving foci from which fresh infection is distributed. Under these circumstances it seems to me the reasonable duty of this Association, at this time, to declare and proclaim its unabated faith in the virtue of vaccine to protect from smallpox, to render persons as immune against variola as an attack of variola itself, and that it is innocent of all mischief when the vaccination is done by a vaccinator who is a competent judge of both the purity of the vaccine and the fitness of the vaccinee.

Let us abide in the hope that the Jenner centennial celebration provided by this Association and to be a part of its exercise at the annual meeting in 1896, may bring out the boundless blessing of the discovery of the immortal Jenner in such wise that all men shall see and acknowledge its protecting power, and even the wayfaring man, though a fool, may not err by further causeless cavil.

Two leading purposes the fathers of this Association had in view at its organization, demanding its serious consideration, were the elevation of the standard of medical education, and that the authority to decide upon the sufficiency of the qualification of a candidate for a diploma should not rest with his teachers.

Much has been done in advancing the extent and character of the collegiate instruction of medical students; the examination of candidates for diplomas is still conducted by teachers who instructed them as was done then, and is no more satisfactory to the thoughtful minority of the profession now than it was then. Forty-eight years ago, seven professors was the conventional number of the faculty for medical colleges, and the annual term was twenty weeks, and in the two terms required for graduation the students heard the same lectures each year. Now there are medical colleges requiring attendance four years, of seven months each, on graded courses under, in some instances, as many as forty-eight instructors. This for the equipment for graduation, while one post-graduate school announces one hundred and sixty-four instructors. Certainly the Association has ground to congratulate itself on the fruits of its persevering labor to secure more thorough medical education, but this has been the theme of so much of the literature of the Association that I drop the general subject and confine my remarks to one suggestion as to a particular line of instruction.

The progress of medicine in the immediate future must be along biologic lines, and it seems to me desirable that every medical college should have a chair devoted specially to instruction in biology. Within the current year, responding to an invitation to make some remarks on matters pertinent to a lecture on bacteria which had just been delivered, a gentleman of superior culture, of extensive travel and acute observation, a lawyer by profession and a statesman by practice, said that the status of physicians had within comparatively a few years undergone a marked change. In earlier historical times the priests were accounted of highest rank and worth in the civil professions, then came a period when the devotees of statecraft received highest honor and exercised most potent influence in the affairs of men. Physicians held subordinate rank and positions both in war and in peace, but in the last few decades the relations of these professions among themselves, and in their standing before the world, had been undergoing significant change until, from being the lowest, physicians were now rising above the other liberal professions and would steadily move forward until they were accorded the first place among honored people of the world, and this for the reason that they have devoted themselves by rigid scientific investigations to make patent the causes of disease and to determine exact measures for emasculating these causes, and for neutralizing their effects when they had eluded detection or escaped emasculation. My own sentiments accord entirely with the spirit of the views enunciated by the learned gentleman, and my estimate is based on the result of the more exact method applied to the investigation of the laws by which the omnipotent Creator has fashioned the world and continues its government. The microscope in skilled hands, and its revelations compared and classified with scientific acumen, have revolutionized our knowledge of the world of living things below the world of microscopic living things, and in this minor, and, to us, newly revealed world, has been discovered the generators of the most extensive, persistent and malignant epidemics that periodically decimate the earth, as well as many of the most frequent and intractable, and fatal disorders that we have always with us. All this knowledge has been wrought out by the devotees of one branch of biology; and an-

other line of biologic workers have carried us back through the morphology of organs, tissues and cells to the origin of vital activity in protoplasm, and, still more important, in doing so have given us glimpses of the origin and development of the somatic mind that will, when the scheme of nervous organization and function shall be clearly portrayed, dissolve the mystery that has in the past obscured our realization of the true nature of hypnotism, Christian science, and other anomalous neuroses which the sciolists, and in an especial manner those claiming to be doctors, are promulgating and practicing to the discredit of true scientists and the injuring of the ignorant and weak-minded classes.

We should apotheosize protoplasm, the dividing line between inorganic and organized matter, itself at once the result of the law of perpetual motion with which the Creator endowed the atoms of elemental matter, and the beginning of that phase of energy known as vital activity, which, in its development as now presented to us, constitutes the entire vegetal and animal kingdom.

No one people or class of people can claim exclusively to have opened the way into this more primitive arcana of nature. The physicists of all nations, botanists, zoölogists, anatomists, physiologists, and their congeners have all participated in this progress. Schwan and Virchow and Ferrier and Jackson and Pasteur and Kock and Sternberg may be mentioned, without prejudice to the labor, name or fame of their many coadjutors, as examples of what benefactors to our race scientists may become, whose genius lifts them to a plane of investigation not covered by the curricula practiced in the medical school of their day, and their distinction is due to their advanced study of biology.

This review impresses me with the importance of establishing in each of our medical colleges where a finished education is intended, a chair especially devoted to teaching the principles and practice of biology on the lines and to the extent herein indicated, from whose alumni we shall have more quickly arise neophyte Virchows, Pasteurs, Jacksons and Sternbergs, whose labors, when further advanced, shall hasten the day when the world shall recognize the medical profession as the paramount benefactors of the human race, by virtue of suppressing the causes of all preventable diseases and alleviating the suffering, shortening the duration, and lessening the ravages of such as can not be prevented, and with this higher estate of the disciples of Esculapius will come such insignia of real knowledge, such fruit of expert skill, that he who runs may read the lines that broadly separate the true position from ignorant or unscrupulous pretenders.

Amendments to the Constitution are always pending; sometimes many, sometimes few; those submitted the preceding year are disposed of at each annual session, but others take their place for consideration at the succeeding meeting. Few of these are approved by the Association, being lost through failure to receive the support of three-fourths of the delegates present or by not being called up by their authors or others.

Last year a special committee appointed at the last preceding meeting made a report remodeling the entire Constitution which necessarily laid over until this meeting and the committee, being continued, will make further report here and the whole subject will come up for final disposition at this session. It is apparent to all who have given attention to this matter that there is much feeling among the members who have been active in working up the changes that will be offered as a substitute for the Constitution as it now exists, and also among those who regard the innovation as an evil instead of a benefit. But while these feelings are right and proper in themselves they need not claim other than watchful attention to secure a fair and unbiased expression of the will of the Association, according to the method prescribed by our laws, and in so doing there is nothing to excite passion or interfere with that deliberation that should distinguish the proceedings of an assembly composed of cultured and refined people seeking the welfare of the guild to which they belong. This may readily be done by taking a vote to determine whether the voters present desire any change in the existing Constitution. If this decision is against any change, that is conclusive for the nonce. If the decision of expressing this satisfaction with the Constitution as it is, the next question should be, Is the report of the committee of revision precisely what the voters want as a substitute? An affirmative vote here settles the matter, and a negative will call for amendments that will adjust either the existing Constitution or the committee's substitute until it conforms to the wish of the delegates. Is it not palpable to every considerate mind that all this may be done without excitement of any kind and with a minimum waste of time of the Association?

And so, too, with our Code of Ethics. For many years there has been a feeling among many most excellent and intelligent working members of our guild that the Code did not fairly accord with the demands of the advanced profession in their intercourse with each other, nor with the proper reciprocal relation between the profession and the public. While on the other hand, many members equally intelligent and devoted to the Association, have felt that the Code of Ethics that has guided the Association through nearly half a century prosperously and honorably, and still is a reliable guide in every advanced thought and action, can not be bettered for our present status, and should not be disturbed. At Detroit, in 1892, this agitation culminated in the appointment of a committee to inquire into the expediency of revising the Code. This committee last year submitted two reports, the majority recommending an amended Code, and indicating the lines on which emandation should precede. The committee was continued to complete its labor, and the fruit of its service will be before you in an extended report. The minority report claimed the sufficiency of the Code as it is, and recommended that it be left intact. Here also, even more than with remodeling the Constitution, there is much warmth of feeling, and as in that case a little calm forethought will convince that a primary vote involving the question whether or not the voters want any alteration of the Code may end the consideration of the subject without excitement, confusion or overwarmth of feeling, by a decision to let the Code stand as it is, and the contrary decision will call for such further procedure as recited for the completion of an amended Constitution, and in this as in that, the work should be done as intelligent and fair-minded citizens transact important business, with decorum and without waste of time.

Touching the sufficiency of the Constitution and Code of Ethics of the American Medical Association, as they are now, I have well-settled convictions, the result of many years of observation, experience and reflection, but I am not here to proselyte to my opinions; as I interpret my mission on this occasion it is to exercise my influence and use my authority to secure to those here entitled to vote, a clear, untrammeled judgment, and to encourage a cheerful acquiescence of all parties in whatever conclusion may be thus reached. Shall I not have the coöperation of every friend of the American Medical Association present in this laudable effort?

ORIGINAL ARTICLES.

A CLINICAL STUDY OF THE SO-CALLED REFLEX NEUROSES.

Read before the Chicago Medical Society, June 4, 1894.

BY H. GRADLE, M.D.
CHICAGO.

Observations gathered mainly during the last fifteen to twenty years by numerous authors have shown that there are many nervous ailments which owe their origin to a minor local disease or anomaly in some part of the body. Yet this subject of reflex neuroses has neither received adequate recognition in general text-books, nor has it been fully appreciated by the profession at large. The interest of such a subject to the general practitioner depends upon the frequency of these ailments. In this respect views differ widely.

Ophthalmic and rhinologic observers have, perhaps more than any other, contributed to this subject and their reports abound in instances of this kind. Indeed some specialists no doubt exaggerate by including under the head of reflex neuroses, conditions, the reflex origin of which is not yet established nor even probable. Many text-books on nervous diseases, on the other hand, slight the subject, or like the treatise of L. C. Gray state that reflex neuroses are rare occurrences. Yet even widely different views as to the frequency of reflex neuroses are not wholly irreconcilable, if we but use the term with strict definition of its meaning. According to gradual usage the name, "reflex neuroses," is at present applied to any *abnormal* nervous process started by the irritation of some peripheral sensory area. This definition by itself enables us to distinguish between mere symptoms which are the *normal* and invariable consequences of disease of a given sensory part, and the reflex neuroses proper which are brought on by such irritation only under certain circumstances. In fact, characteristic of reflex neuroses is their apparent capriciousness. The same peripheral lesion which leads to a reflex neurosis in some patients may exist in others without producing such disturbances.

It is evident that if we accept this definition, very many headaches, neuralgias and motor disturbances come under the head of reflex neuroses, and that this nosological group hence includes many of the ailments daily met with. On the other hand, it may be admitted that epilepsy, chorea and other types of nervous disease of graver significance are probably but rarely of reflex origin.

The term "reflex" is used by the clinicist in this connection in a wider than its true physiologic significance. As the physiologist speaks of the act of winking as a reflex induced by conjunctival irritation, so the clinicist may call a blepharospasm a reflex neurosis, if it is maintained by conjunctional disease. But to speak of a neuralgia due to a diseased tooth as a "reflex" occurrence is not warranted by physiologic nomenclature. We must either intentionally enlarge the significance of the term "reflex," or we may call these nervous disturbances, *neuroses* of *peripheral origin*, and subdivide them into motor, secretory, vaso-motor, sensory, (and possibly inhibitory) neuroses of peripheral origin. Even the motor "reflex" neuroses are not always reflex in the sense of the physiologist. Some of them, it is true, are but types of normal reflex action morbidly exaggerated. As such might be mentioned sneezing fits from nasal disturbances and blepharospasm from ocular irritation. In other instances, however, such as asthma and reflex epileptiform convulsions, the nervous disturbance has no physiologic prototype. Unlike the normal reflexes, these motor phenomena are not the immediate consequence of the irritation to which they owe their origin. The peripheral excitation does not lead at once to a reflex action, but its continuance influences the nervous centers so that *periodic* discharges occur in the nerve channels which are normally not open to impulses of such origin. *Periodicity* is also a feature of some sensory neuroses like migraine and the so-called visceral neuralgias. Other sensory neuroses, however, such as many forms of headache and neuralgia are either constantly present or recur with every increase of the peripheral irritation.

In order to have a definite basis for further discussion of the subject I will now tabulate the neuroses of peripheral origin, the existence of which has been satisfactorily established by the observations of more than one author. Without attempting any full review of the literature I will only quote as authorities some of the writers who reported either the first or the most conclusive instances of such neuroses, or who have summarized the literature. I may add that I have personally seen illustrations of nearly all the quoted neuroses of ocular and nasal origin.

STARTING POINT.	NEUROSIS.
Anomalies of refraction and accommodation of the eye[1] and some instances of anomalies of the external muscles.[2]	Headaches, continuous or periodic. Vertigo. Nausea. Ciliary spasm. Blepharospasm and chorea of facial muscles. Epilepsy (rare).
Diplopia from insufficiency of one of the external muscles of the eye.	Deviation of the head simulating wry-neck.[3]
Nasal disease[4] and suppuration of maxillary sinus.[5]	Lachrymation. Discomfort in eyes and lids.[6] Scotoma fugax (blind headache).[4] Vaso-motor disturbances of lids and face.[4] Headaches.[4] Neuralgia of branches of trigeminus. Vertigo. Facial spasm.[7] Cough.[8] Spasm of glottis.[4] Asthma.[4, 9] Nightmare. Epileptiform convulsions.[10] Functional cardiac disturbances.[11] The symptoms of exophthalmic goitre.[12]

[1] S. Weir Mitchell. Am. Jour. of Med. Sciences, April, 1876. Numerous contributions in the Ophthalmic Section of the Am. Med. Association since 1880. Gould, in Am. Jour. of Med. Sciences, Jan. 1890, and Med. News, Aug. 23, 1890.

[2] Stevens, Functional Nervous Diseases, 1887. Swan M. Burnett, Transactions of the Am. Ophth. Society, 1891.

[3] Nieden, Centralblatt f. Augenheilkunde, Nov. 1892. E. G. Colburn, Proceedings of the Ophth. Section Am. Med. Ass'n, 1893.

[4] W. Hack, Berliner klin. Wochenschrift, 1882, No. 25, and Ueber eine operative Radical—behandlung bestimmter, Formen von Migräne, Asthma, Heufieber, sowie zahlreicher anderer Erscheinungen. Wiesbaden, 1884. Schaeffer, Duetsche med. Wochenschrift, 1884, pp. 357 and 376. Sommerbrodt, Berl. klin. Wochenschrift, 1885, Nos. 10 and 11. Complete summary by J. A. White, Art. Neuroses of the Nose, &c., in Vol. II, Burnett's Syst. of Dis. of the Ear, Nose and Throat, 1893.

[5] Scheinmann, Berl. klin. Wochenschrift, 1893, Nos. 49, 50, 51.

[6] Gruening, N. Y. Med. Record, Jan. 30, 1886. Gradle, Proceedings Ophth. Section Am. Med. Ass'n, 1892. Journal of the Am. Med. Ass'n, Sept. 10, 1892.

STARTING POINT.	NEUROSIS.
Ears.	Vertigo. Nystagmus.[13] Cough (rare).
Pharynx and faucial region.[4]	Cough. Epilepsy.[14] Spasm of glottis. Morning vomiting.[14]
Teeth.[15]	Neuralgia of Trigeminus. Otalgia. Headaches. Facial spasm. Epileptiform convulsions.[16]
Stomach[17] and intestinal tract.	Headache. Vertigo. Trigeminus neuragia.[18] Visceral neuralgias. Cardiac and circulatory disturbances. Epileptiform convulsions.
Painful peripheral cicatrices.	Epilepsy.[19]

This list would be incomplete without reference to neuroses originating from disease of the pelvic organs[20] and the male genitals (especially adherence of the prepuce).[21] But since I have no personal experience in this line, and since authors on these subjects are neither as precise in their statements nor as harmonious among themselves as in the instances tabulated, I will base my comments principally on the other topics.

The coexistence of a peripheral anomaly and of a functional nervous ailment is not sufficient by itself to base upon it the conclusion that the latter is dependent upon the former. The reflex origin of a given neurosis can, however, be proven by various methods. In many instances it is suggested by the patient's history if carefully examined. Whenever the nervous disturbance follows regularly any intensification of preëxisting local ailments, a relationship between the two phenomena is highly probable in the light of our present information. If the patient states that his headache is brought on by the use of his eyes, or in another case that his attack of asthma is always preceded by sneezing and stuffiness of the nose, there can be little doubt as to the relation of cause and effect. In other instances, however, the cause is persistently present, while the nervous disturbances are of periodic occurrence, for instance, in migraine dependent on astigmatism, and in the few rare cases of epilepsy which have been traced to nasal irritation. Under these circumstances, the examination of the patient can only lead to a tentative diagnosis of the origin of the nervous trouble. The experimental production or exaggeration of reflex neuroses in patients subject to them is possible only in some instances. Thus sneezing fits, spells of nasal cough, more rarely headaches, and occasionally asthma and attacks of syncope may be induced by irritating with a probe the sensitive nasal area of patients suffering from such nasal neuroses, but this experiment is not always successful. Occasionally, too, periodic attacks of the existing neurosis follow intra-nasal cauterization. In various instances of epilepsy due to sensitive cicatrices, the reporters were able to bring on the attacks by pressure upon the scars.

As a rule, however, the reflex origin of a neurosis can only be proven by its cessation after eliminating the cause, a test which constitutes the principle of treatment. If the refraction of the eye is suspected as the cause, absolute rest of the eyes, if necessary, combined with the use of a cycloplegic drug, and finally appropriate glasses, decide the correctness of the diagnosis. If heterophoria, a strain of the ocular muscle during the maintenance of binocular vision, seems to account for the nervous disturbance, the exclusion of one eye by a shade will obviate the immediate consequences of this strain. The nasal neuroses are often checked at the beginning of an attack by the thorough application of cocain to the sensitive area, although this test is not always positive. And finally, in those instances in which fecal retention or irritation of the bowels by parasites can be suspected as the cause of the neurosis present, systematic intestinal evacuation is the test of the correctness of this view.

In other instances the therapeutic test can not be as decisive concerning the origin of the neurosis as in those just quoted. Whenever the peripheral lesion is of such a nature that persistent treatment is required for its removal and that some time must elapse before its consequences can be expected to cease, good judgment is necessary to determine whether the neurosis is really of peripheral origin or simply a coincidence. If the interests of the patient demand general hygienic direction besides the elimination of the local disease, the decision is particularly difficult. This explains why our knowledge of intestinal and uterine "reflexes" is so much less positive than the doctrine of ocular and nasal neuroses. Under such conditions, it is only the accumulation of similar well observed cases upon which reliable conclusions can be based.

It might seem as if the most conclusive evidence could be obtained by the surgical removal of the cause of irritation whenever this is feasible. Indeed, the most brilliant cures of nasal reflexes and of epilepsy due to painful cicatrices come under this head. But here also judgment and neurologic training are required to avoid sources of fallacy. It has been said that some of these cases, for instance asthma of nasal origin, were really cured by counter-irritation, and that the galvano-caustic destruction of the sensory area in the nose acted as a "derivative." This objection could be entertained only if it had been shown that "counter-irritation" anywhere else yielded equally positive results, which has never been done. The validity of the reflex theory has also been assailed on the ground that relapses have occurred after such operative cures. But whenever such relapses were examined by competent observers (Hack quotes such cases), it was found that they depended on relapses of the local disorders, which the surgical treatment had failed to eradicate thoroughly. Such coincidences are really but an additional proof of the correctness of the "reflex theory."

The real source of fallacy in conclusions based upon the results of operative treatment is, in my judgment, the difficulty of distinguishing between the influence of the operation itself and the influence of the mental impression made by the operation. It is well known to neurologists that emotional impres-

[7] Peltesohn, Berl. klin. Wochenschrift, 1892, No. 32.
[8] I. N. MacKenzie, Am. Jour. Med. Sciences, July, 1888.
[9] Bosworth, Diseases of the Nose, etc., 1889.
[10] Finke, Deutsche med. Wochenschrift, 1885, No. 4. Schneider, Berl. klin. Wochenschrift, 1888, No. 42.
[11] Kuepper, Deutsche med. Wochenschrift, 1884, p. 828. v. Stein, Monatsschrift f. Ohrenheilkunde, 1889, Nos. 9 and 10.
[12] Hack, Deutsche med. Wochenschrift, No. 25. Musehold, Deutsche med. Wochenschrift, No. 5, 1892.
[13] Kipp, Transactions Am. Otolog. Society, 1888. Cohn, Berl. klin. Wochenschrift, 1891 Nos. 43 and 44.
[14] Personal observation.
[15] Résumé by A. P. Brubaker, Art. Reflex Neuroses, in Vol. iii of Litch's Am. System of Dentistry
[16] Llebert, Deutsche med. Wochenschrift, 1885, p. 643.
[17] Trousseau, Medical Clinic, Sydenham Translation, Vol. iii and Vol. i, Art. Epilepsy.
[18] Gussenbauer, Prager med. Wochenschrift, 1886, p. 31.
[19] A. R. Bowlby, Injuries and Diseases of Nerves, 1889. W. Rose, Brit. Med. Journal, 1889, p. 475. Gallerani and Raclotti, Neurolog. Centralblatt, 1893, p. 479.
[20] Résumé by G. I. Engelman, Art. Hystero-neuroses in Vol. ii, Mann's System of Gynecology, 1888.
[21] W. C. Kraus, Journal of Nervous and Mental Disease, 1893, p. 409.

sions and "expectation" may stop for a time, or even dissipate permanently, choreic movements, but more especially hysterical pains and spells, even when they had existed for a long time. It is equally a matter of experience that some cases of epilepsy are temporarily benefited by any new treatment of an impressive nature. For this reason, much familiarity with the clinical history of functional nervous disorders is requisite to enable the observer to decide whether the disappearance of the symptoms could be properly attributed to the operation, or whether the cure depended rather on mental "suggestion."

The less we know about the pathologic significance of the alleged peripheral cause, the less reliable will be any conclusions as to its relation to coexisting neuroses. Hence skepticism is in place when for instance, Scheinmann[22] seeks the cause of some nervous condition in sensitive areas wandering from place to place in the nose and reappearing after the operation in another spot. Judgment might also be held in reserve as to the relation of neuroses to low degrees of heterophoria. No doubt there are cases where the strain of eye muscles working under disadvantage leads to nervous disturbances. But to what extent the lower degrees of insufficiencies of ocular muscles—almost normal occurrences—are resented by the nervous system is still an open question. Any oculist who has learned by experience how little the muscular balance of the eye-ball is at times changed by extensive tenotomies in well-marked cases of ocular deviations of the latent type can not but doubt whether the mere nicking of muscles in low degrees of heterophoria cures the patient by influencing the muscular tension or the patient's mind. Indeed the question is a proper one, whether many instances of heterophoria are not by themselves hysterical manifestations, and such a view would be supported by the frequent experience of complete relapses of the ocular deviations after temporary cures by operations on the muscles.

More than mere skepticism, however, is called for, when attempts are made to cure neuroses by muscle-cutting—that is to say, by removing the alleged muscle-strain in the forced effort at binocular vision, in cases which present manifest strabismus and hence have no binocular vision.[23]

When, however, persistent and well-defined nervous symptoms disappear promptly and permanently after the surgical removal of some demonstrable peripheral lesion, or return only if their starting cause relapses on account of insufficient treatment, there can be no logical doubt that the neurosis has been maintained by the peripheral anomaly in question.

In all discussions on "neuroses" it must be clearly kept in view that the manifestations of a disordered nervous system are but symptoms, and that these symptoms may depend on different remote causes in different instances. Similar symptoms may be of "reflex" origin from one organ or another in one case, but may be due to actual lesions in the nervous system in another patient. Hence there is no contradiction in admitting that epilepsy and chorea are sometimes of peripheral origin, although in most instances they depend on disease of the nerve centers.

The peripheral irritation which can induce nervous disturbances in certain patients is not necessarily and indeed but rarely felt as pain. It may even give rise to so little conscious sensation that inattentive patients overlook it, or at least do not connect it with the neurosis started by it. When, for instance, ametropia causes headaches or other neurotic symptoms, the patient may or may not complain of discomfort in the eyes. Personally, however, I have never seen a case in which close questioning did not elicit at least the admission that the eyes did give rise to some slight annoyance when used steadily. Similarly in the case of nasal and pharyngeal disorders. While in some instances the patients may not complain directly, still I was always able to learn by proper questioning that some local disturbance could be felt, though perhaps not enough to suggest it as the cause of the neurosis. But there are also many instances of physiologic reflexes started by an excitation of sensory nerves of which the individual does not become conscious. As illustrations might be mentioned the regulation of the act of accommodation by the blurring of retinal images, the coördination of the external muscles of the eye under the influence of diplopia, the self-regulation of the breathing movements by means of the distension of the pulmonary tissue, the changes in the cardiac rhythm and in the size of the arterioles according to local conditions of rest or activity, and many other instances.

A clear insight into the pathogenesis of reflex neuroses can only be obtained by an analysis of all the factors concerned in their production. For evidently the peripheral anomaly starting the neurosis is but one of the factors, or why should a patient with nasal polypi have asthma when so many others suffering from the same nasal condition escape the secondary affection? Why should but a small number of hypermetropic people get headaches while the majority of eyes with this deficiency cause only disturbed vision and nothing else? If an irritation alike qualitatively and quantitatively produces disturbances in the nervous system of but one person out of many, there must be special reasons for this exceptional result. Unfortunately our knowledge of the conditions determining neuroses is as yet but very meager.

The history of patients shows often that the nervous trouble began after some special increment in the intensity of the peripheral irritation. Thus very frequently headaches from eyestrain date back to the time of unusually severe use of the eyes. Again, in other instances, nasal neuroses begin when the chronic nasal condition is intensified by an acute coryza or when the nose has been irritated by exposure to dust. But these observations, important as they are, do not solve the question why such peripheral irritation will only cause neuroses in some persons and not in others.

In a fair proportion of these sufferers we can recognize hereditary influences. In my inquiries into the family histories in cases of ocular and nasal neuroses, I have very often found similar affections in different members of the family. While it is in no sense an explanation to state that neuroses are more liable to occur in a person predisposed by heredity still the fact as such is worth noting.

In the sensory neuroses, and especially those of ocular origin, I have learned to regard as important factors the pernicious results of indoor confinement in cities. My case-book contains numerous records of school children and young clerks whose headaches or dizziness or other sensory discomforts were for

[22] Berl. Klin. Wochenschrift, 1889, Nos. 14 to 21.
[23] Ranney, New York Med. Jour., 1894, pp. 80 and 113.

the time being checked by glasses of moderate strength, but who were equally comfortable without their glasses after a thorough vacation. It is especially during the growing period of life that want of out-door exercise and close confinement increase the liability to reflex disturbances. Chlorosis also has its share in the etiology of these affections, and where the history shows that the nervous disturbances although clearly of peripheral origin have only begun since anemia was manifested, iron and hygienic directions are often as serviceable as the correction of the peripheral cause.

The history of some cases shows that the sensory neurosis dates back to the time of recovery from some acute fever—measles, more often in my experience than any other. I have also noticed relatively often that headaches of refractive origin began during the lactation of mothers. In two instances of nasal neuroses, observed by myself, excessive smoking seemed to be a predisposing condition, and moderation of this habit relieved the intensity and frequency of the attacks. One of the patients had short attacks of dyspnea with palpitation of the heart and was ultimately cured by operations restoring the patency of the nose. The other one had periods of cardiac irregularity and acceleration presumably due to papillomata in the nose, but the diagnosis was not made certain, by his refusal to the operation.

A factor to which but little attention has yet been called is the coexistence of several sources of irritation in the system. I. N. MacKenzie (*Am. Jour. Med. Sci.*, April, 1884,) has observed that nasal neuroses are often most pronounced during menstruation and that they can be exaggerated by sexual excesses. It is well known that migraine accompanies the menstruation of some women. In a few instances of migraine especially accentuated during such times I have proven the ocular origin by successful correction with glasses. Several cases of asthma, the nasal origin of which was shown by the ultimate relief given by nasal surgery, have given me the history of attacks induced particularly during times of intestinal distress and in these patients dietetic management had a distinct influence on the frequency of the asthmatic attacks. It is common experience, too, that pregnancy predisposes some women to serious nervous symptoms. In some instances of facial neuralgia, of scotoma fugax and of circulatory disturbances in pregnant women, the nasal origin was strongly suggested by the history of the nasal distress, although I have only twice demonstrated the relationship by the success of intra-nasal operations. It should be remembered in this connection, that nasal operations have several times been followed by miscarriages.

It must finally be admitted that in many instances of neuroses of peripheral origin no accessory influences, no disturbances of nutrition, in fact no deviation from perfect health of the nervous system can be detected. Indeed this seems to be the case in many of the more typical instances in which the elimination of the starting point stops at once all nervous symptoms. On the other hand, whenever the history shows fluctuation in the intensity of the nervous troubles and periods of intermission, it is more likely that the peripheral cause has been aided in its influence upon the nervous system by accessory baneful circumstances without which it would not have sufficed to induce the neurosis. These considerations explain also why some neuroses cease spontaneously, in spite of the persistence of the peripheral cause, while others never stop until the starting point is removed.

Finally it is proper to ask, What is the relation of reflex neuroses to hysteria? While hysterical persons are not exempt from these troubles, I have neither found in my experience nor in the reports in literature, any large proportion of cases of neuroses of well established peripheral origin in patients with manifest hysteria. I might almost say that where the history of hysteria is clear, the therapeutic test is apt to fail in establishing the peripheral origin of the symptoms. No doubt some of the hysterical complaints, for instance some forms of headache and the globus hystericus are really of peripheral origin. But it seems as if in their production it were not so much the inferior centers as the cerebral hemispheres in which the disturbances are induced. For hysterical manifestations when once established are apt to persist, even after the influence which started them has been eliminated.

THE EMPLOYMENT OF THE ELECTRO-MAGNET IN OPHTHALMIC PRACTICE.

Read before the Annual Meeting of the State Medical Society of Michigan.

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The employment of the magnet in ophthalmic practice dates back barely twenty years; though, as "there is nothing new under the sun," the magnet was probably known to the ancients; and, at least two thousand years ago, the Brahmins were well acquainted with its use in surgery, as we find it mentioned in this relation in their sacred writings.

The first description of its use in connection with the eye was reported by Fabricius Hildanus in 1656. But Dr. McKeown, of Belfast, Ireland, has the honor of having been the first to effectively employ the magnet in an operation in the deep structures of the eye, extracting, by this means, in the year 1874, a chip of iron from the vitreous humor.

In 1877, Hirschberg constructed his electro-magnet, which on account of the large size of the tips, and the nice balance of the instrument has become the most desirable for general practice. The instrument, in simple terms, may be described as consisting of a core of soft iron, of cylindrical shape, around which is coiled insulated copper wire; the entire instrument being protected by a neat case of ebonite. There are two screws to receive the battery connection at one end, while at the other end the core projects, so that tips of different sizes can be attached to it. One large zinc-carbon cell will give a sufficiently strong current; but the storage battery is altogether more satisfactory, as it will generally be found in good working order, and giving off a much stronger current—decided advantages.

Before attempting the insertion of the magnet, it is most important that there should be a positive diagnosis of the presence of a piece of iron or steel in the eye; and, if possible, its exact location should be determined. Then, in recent cases, no time must be lost in deciding on its removal.

In doubtful cases, where an object in the vitreous with the ophthalmoscope, or by focal illumination is observed, the magnet brought in contact with the globe will sometimes clear up the diagnosis of a particle of iron, by making it alter its position; and, then often the patient will experience pain, owing to the movements of the object within the eye. When there is suspicion that a foreign body has penetrated the eye-ball, thorough examination with the ophthalmoscope should at once be made; for, if the media are clear there will be no difficulty in tracing the track of the intrusive substance. Air bubbles in the vitreous are sometimes to be seen, giving strong evidence of a foreign body having invaded the eye. Small rents in the iris, which perhaps would escape detection by a mere ocular examination, can readily be seen by the aid of the mirror.

The chips of iron or steel which penetrate the eye-ball are usually splinters from hammers or other tools requiring considerable force to operate them. Boiler makers, from the fact that they are constantly using the hammer upon iron plates and rivets, would perhaps be found to form the majority of those meeting with this class of injury. But such accidents would seldom happen if the operatives wore mica spectacles as a protection to the eyes while at work; a precaution which, I believe, many manufacturers in Germany insist on their employes adopting.

Metallic chips seldom pass completely through the eyeball; they usually embed themselves in the background of the eye or fall below in the vitreous. Small particles of iron implanted in the tunics of the eye may remain a lifetime without exciting inflammatory action or interfering with vision. Hirschberg removed with the magnet a piece of iron from the eye after a residence therein of thirty years. But when a foreign body lies in the vitreous, it nearly always creates a disturbance, as well mechanically as chemically; so that the eye, almost without exception, would be lost unless the offending body was removed.

The operation can be performed with or without the aid of an anesthetic; preferably without, as the pain is not great, and often the patient can assist the operator by controlling the movements of the eye. There is but slight danger of a prolapse of the vitreous; and where it does occur only a drop or two appears in the wound and can be easily dealt with.

Splinters of iron embedded deep in the corneal tissue, and threatening to pierce into the anterior chamber, can often be readily removed by the magnet. When they have penetrated through the cornea, and lie in the anterior chamber, or rest in the iris, the tip of the magnet, introduced through the wound and brought in contact with the particle, will succeed in its removal without producing as much disturbance, or as greatly endangering the wounding of any of the delicate structures related to the aqueous humor, as would the employment of the forceps.

If the particle lies in the crystalline lens, the safest and best plan of dealing with it is to extract the lens by the ordinary operation for cataract. When the chip has pierced the deeper structures of the eye it is important to locate its site if possible; but hemorrhages into the vitreous may cloud this medium. As a rule the tip of the magnet may be guided in the path left by the foreign body, except where the wound leads through the cornea, iris and lens, when it may be best to make an incision through the sclera. Or, where the wound has healed, if we are able to see the foreign body its position will suggest the course to be pursued, as the magnet should always be brought in contact with, or as near as possible to the chip of iron.

The incision through the sclera, choroid and retina should be made from six to eight mm. from the sclero-corneal junction, on a meridianal line, and from five to six mm. long. Boldly insert the magnet and complete the circuit, as the effect is strongest at the inception of the current. After allowing it to remain a few seconds, slowly withdraw the instrument, and, if successful, the fragment of iron will be seen on its point. It may be necessary to make several excursions into the vitreous, and with tubes of different shapes, before producing the result.

It is astonishing to what extent the vitreous can be stirred up by the magnet, if the rules of antiseptic surgery are carefully complied with, as the report of the following case will illustrate:

H. M., aged 44 years, was referred to me by Dr. Hitchcock, on Oct. 13, 1892, with the following history: While at work driving rivets on Oct. 11, in the Brennan boiler shops, Detroit, a piece of the hammer he was using broke off and struck his right eye, wounding that organ. He was immediately taken to the office of an oculist, who, after carefully examining the injured eye, advised him to have it at once enucleated, in order to save the other eye from an attack of sympathetic ophthalmia. It was forty-eight hours after the accident before I first saw the injured eye, which appeared to have suffered a penetrating wound of the cornea in close proximity to the temporal side of the sclero-corneal junction, on a line with, and a little higher than the center of the pupil. The laceration was from five to seven mm. long, and had not completely closed. There was a rent in the iris opposite the corneal wound. The media were obscured. The patient had no pain in the eye and has never had any since the accident. I gave the opinion that a foreign body had penetrated the eye and probably was in the vitreous, or embedded in the background of the eye; and strongly advised him to consent to my using the electro-magnet. On his acceding, I operated upon him that night, at 11 P.M., at Harper Hospital, in the presence of Drs. Hitchcock and Hickey. Having first subjected the eye, eye-lid, etc., to a bath of a solution of 1-5000 of the bichlorid of mercury, I introduced the straight tip of the magnet through the wound in the cornea and iris, in the track made by the chip of steel, which it easily followed into the vitreous.

The tip was allowed to remain in the vitreous several seconds, and was then carefully withdrawn; but it did not succeed in bringing forth a chip of steel. The straight tip was now exchanged for a curved one, and made to enter the vitreous by the same route; and after slowly and delicately searching the vitreous in all directions, was withdrawn from the eye; but without the desired result. It was introduced for the third time, and was again unsuccessful; when, feeling that the vitreous had already been stirred as much as I dared, I decided on not attempting another trial. The eye was dressed and bandaged, and the man entered as a ward patient, and was turned over to the attending oculists of the Hospital. He remained in the Hospital for ten days, and shortly afterwards returned to work.

I examined him only a few days ago, on April 12, and was surprised to find he had absolutely normal vision with the wounded eye. The lens had miraculously escaped injury; there was but a slight adhesion of the iris to the cornea; and the rent in the iris had a background of clear media. In the fundus, on a straight line back of the wound in the iris, fortunately a few mm. to the outer side of the fovea centralis, is a deep fissure involving the retina, choroid and sclera, and in the central part of this, which shows as a white patch, a pointed bluish-gray object projects anteriorly into the vitreous. It seems firmly embedded in the sclera; extending three mm. into the vitreous—measured with the ophthalmoscope; and can not be made to stir. For various reasons in

connection with the facts given, and including the shape and color of the object, I am of the opinion it is a sliver of metal.

I have acquainted the patient with the existing condition of his eye, advising him to consult an oculist should the sight become impaired, or pain or redness manifest itself, or should there occur other indications of a foreign body exciting a disturbance; when the magnet can be again called into use; and, if unsuccessful, the eye be enucleated, in order to save the sight of its fellow. Considering that almost every structure of the eye was severely wounded, and the heroic measures exerted for its relief, it is remarkable that the eye retained the power of sight—normal vision at that.

A distinctive instance of the great value of the ophthalmoscope as a diagnostic aid, and of the successful use of the magnet in extracting from the eye a chip of steel which had remained in the vitreous nearly eight months, is given in the following case:

On June 20, 1893, W. P., of Detroit, aged 39 years, while driving a cast steel hammer through an inch board, by striking the former with a wrought steel hammer, had a small piece of the steel split off and strike his right eye. He was satisfied that the chip had not penetrated the eye, as all he could notice was a slight abrasion on the upper and outer part of the sclera. As there was no redness or pain, he did not consult a surgeon until a month later when, on account of a blurring of the vision he visited an oculist, who examined his eyes, and finding an error of refraction, prescribed glasses. This seemed to assist his vision; although he was not conscious of any improvement in the case of his injured eye, the sight of which was very much impaired, but to what extent he can not now state. This condition continued without any material discomfort until about Jan. 1, 1894, when the injured eye began to pain him. For this he treated himself, and continued at his daily labor until January 16, when the pain became so severe he was forced to stay at home. On this he consulted another oculist who referred him to me.

I saw the case for the first time on February 7. I found there was no scar on the eye-ball. Vision equaled perception of light only with the right eye, while the left eye had normal vision. From the history he gave me I suspected a foreign body in the eye was the cause of all his trouble; and my suspicions were confirmed by an ophthalmoscopic examination which revealed an intrusive substance in the vitreous lying on the floor of the fundus.

It was with difficulty that I could make him believe that the chip of steel was in the interior of his eye, and had been there for nearly eight months. He entered St. Mary's Hospital and consented to my attempting the removal of the chip with the electro-magnet; giving me permission to enucleate the eye if the magnet failed to extract the bit of steel. In the Hospital amphitheater, before a number of physicians and students of the Detroit College of Medicine, I made with a Baer's cataract knife an incision about eight mm. long, through the sclera, retina and choroid into the vitreous, commencing about five mm. from the sclero-corneal junction, parallel to, and on a line with the insertion of the inferior rectus muscle, so as to make the opening as near as possible to the foreign body. The large curved tip of Hirschberg's magnet, through which passed a strong current from a McIntosh storage battery, was brought into the mouth of the wound, but failed to attract the alien particle. I then plunged the tip into the vitreous, and turned its point on to the floor of the fundus; and on withdrawing the magnet had the extreme pleasure of seeing a chip of steel adhering to its point, confirming my diagnosis. Not a drop of vitreous presented itself in the wound. A stitch was taken, uniting the conjunctiva over the wound, and the eye was thoroughly bathed in a 1-5000 solution of the bichlorid of mercury and bandaged. The chip of steel is triangular in shape and weighs a quarter of a grain. The patient complained of great pain in the eye on the night following the operation. This, however, gradually passed off; and he awoke the next morning free of all distress, and he has not had the slightest discomfort ever since. He left the Hospital in seven days, and was able to return to work in three weeks.

The eye is slowly clearing from the brown (oxidation) stain of the iron; but it is probable it will take a considerable time to fully recover from this. Though the vision of the injured optic is not improved to any appreciable extent as yet, as the ball retains its shape and almost normal appearance, it is far better than an artificial eye; and the patient is enthusiastic over his recovery, fully realizing that the removal of the piece of steel has saved his only useful eye from probable blindness through sympathetic ophthalmia.

The prognosis of magnet operations is in general favorable. Dr. Heinrich Hildebrand, of Hagen, Germany, has collected 328 cases of magnet operations, including 66 of his own. Eighty of the operations concerned the anterior half of the bulbus, the rest were in the vitreous. Of the operations in the anterior half, 67 turned out favorably. Of the 248 "vitreous" operations, 74 failed to extract the foreign body. In the remaining 174 cases, 23 suffered phthisis bulbi; 26 had to be enucleated, later on; 62, or 36 per cent. of the cases, recovered with normal vision, or a part thereof; while 91 cases retained the form of the eye-ball, without vision. These results should prove the powerful aid afforded by the electro-magnet in rescuing the eyes of the victims of flying particles of iron or steel.

When there is failure to extract a foreign body from the interior of the eye, a most important and sometimes perplexing problem presents itself; namely, whether enucleation of the injured member should be performed, for fear of sympathetic ophthalmia attacking the non-injured eye; or whether the eye-ball should be allowed to remain, trusting that the foreign element is in a position to excite no disturbance.

Where the ciliary region, "the ring of danger," has not been wounded, and if the foreign body is a chip of iron or steel, and after a most careful search the magnet fails to bring forth the chip, I am not in favor of immediate enucleation; but prefer keeping the patient under the closest observation for some days, when, by the extent of the inflammatory reaction, the best way of dealing with the case can be determined.

It is not uncommon, it may be repeated, for a particle of iron to embed itself in the walls of the eye, and remain there without interfering with useful vision, or exciting any inflammation; as the former case I have reported, added to numerous others, will show.

No set rules can be laid down as to the best methods of dealing with injuries to the eye-ball; and as Noyes so aptly remarks: "One of the greatest triumphs of the oculist is when he discriminates correctly the dangers of an injured eye, and by skilful treatment and wise forbearance preserves to the patient his precious possession of sight or eye-ball."

It is only proper that I should acknowledge my

indebtedness for some of the opinions I have here presented, to the distinguished oculist, Prof. Hirschberg, of Berlin, under whom I had the honor of prosecuting my studies while in Germany. One can not easily exaggerate the inspiration of his example. His superb technical abilities, including his patient carefulness, and, above all, his unwearied insistence, by precept and practice, of the observance of the requirements pertaining to antiseptic surgery, leave an impression upon those who come into contact with him not soon if ever obliterated. I dwell upon this latter, as too many are apt to belittle or disregard the preparatory precautions which so largely contribute to the success of an operation. Hirschberg is immovable in his adherence to even the smallest of these safeguards; which in one so eminent in his profession may well be considered strong evidence of the wisdom of their employment.

A CAUSE OF FAILURE IN THE SURGICAL TREATMENT OF INTERNAL STRABISMUS.

Read by title before the Pennsylvania State Medical Society, May, 1894.

BY HOWARD F. HANSELL, M.D.
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The full measure of success in the treatment of functional deviations of the visual axes is attained only with the restoration or establishment of binocular fixation for all distances. This is the ideal result. A partial, but subjectively more important, success is the cure of the deformity, since patients with functional internal squint seldom complain of defective visual acuteness, diplopia or asthenopia; but they ask for relief for appearance's sake. All operators who have followed their cases over a period of several months or years must confess dissatisfaction with the usual routine methods of examination and surgical practice, and admit their frequent failure to restore equilibrium and coördination of the ocular muscles, or even wholly to remove the disfigurement. This is due, in my opinion, not to faulty technique, but to an imperfect conception of the physiologic relation of the accommodation to the straight and oblique muscles.

It seems to me, notwithstanding the able articles on the etiology and treatment of squint by Perinaud,[1] Hansen Grut,[2] Schnellen[3] and others, but little advance has been made in the practical management of hypermetropic squint since 1864, when Donders published his well-known explanatory theory. He speaks, in his classical treatise, of four causes, any one of which may coöperate with hypermetropia in developing strabismus: 1, congenital difference in the accuracy of vision, or the refractive condition of the two eyes; 2, spots on the cornea; 3, peculiar structure or innervation of the muscles or easy mobility of the eyes inward; 4, large angle alpha making apparent divergence for far, and too great convergence for near. But he does not allude to a fifth complication, purely physiologic and an extension of his own line of thought which perhaps more often than those enumerated, militates against a scientifically successful result of operation.

Functional internal squint, which excludes strabismus arising from changes in the transparency of the cornea and lens through disease, retinal exudations and choroidal atrophies in the macular region, paralysis through interruption of the nerve force or nuclear disease, muscular inaction or over action from traumatism, deviations from cicatrices or other organic cause, is dependent in 75 per cent. of cases on hypermetropia.

The correctness of Donders' theory is uniformly acknowledged. You will pardon a brief statement of it. The hypermetrope must accommodate to secure the best acuity of vision in the distance. His relative accommodation may or may not be disturbed. If the former, he must simultaneously converge. But convergence for infinity means diplopia. Therefore the cornea of *one* eye is rotated inward. Fixation with one eye, constant squint, or with either eye indifferently, concomitant or alternating squint, is determined by a difference in the refraction, by amblyopia or by habit. The dependence of convergence on accommodation is based upon the anatomical fact that the ciliary and the interni muscles are under the control of branches of the same pair of nerves, and when the bounds of relative accommodation and convergence are overstepped, stimulation of the ciliary induces a consistent and unavoidable over-contraction of the interni.

If this theory explained all cases we meet in practice, the treatment indicated would be direct and successful, when instituted before the muscular tissue undergoes organic contraction. There is, however, a large proportion of cases, properly classified in direct opposition to Donders, as complicated, when one eye is invariably used in fixation for all distances and the total excessive convergence is borne by the second eye. Donders says they are "simple," suggests correction of the refraction and tenotomy, and intimates a successful result. These so-called simple cases are, in fact, complicated by two anomalies; one of vision and one of muscular action. The squinting eye is amblyopic, congenital or acquired from disuse, and is not only turned inward but *rotated inward and upward*. The oblique deviation has been persistently ignored. In some text-books it is not mentioned; in none is it described at length or explained. This had been otherwise, were we accustomed to investigate the kind and degree of turning by the only scientific means, namely, the study of the relation of the false and true image, since the relatively slight upward turning is overshadowed by the greater deformity of the convergence.

In concomitant squint, where either eye is used indifferently in fixation, there is no essential difference in the refraction or in vision. If amblyopia is the result of disuse, it can not develop. In constant squint, on the other hand, the deflected eye is always amblyopic and usually has the greater optical defect.

The etiology of the upward deviation is precisely that of the convergence. The third nerve supplies other external muscles besides the internal, and unless there is a peculiar relationship or connection, undemonstrated by the microscope, between the nuclei of the ciliary and interni muscles which does not obtain with the others, we would certainly and logically expect a response to the stimulus given by the accommodation to include the superior and inferior rectus and the inferior oblique, and not be limited to the internus and the iris. The rotation of the cornea in consequence of their combined action must be inward and upward—inward because the antagonist of the internus is not involved, and upward be-

[1] Ann. d' Ocul., Vol. cvi.
[2] Trans. Oph. Soc., Jan., 1891.
[3] Arch. für Opkthal., Bd. 36, Abt. iii.

cause the inferior oblique and superior rectus are stronger in their associated action of turning the cornea upward than the inferior rectus in opposing them. Therefore, if hypermetropia is the causative factor in the production of abnormal convergence, and its influence extend to the elevators and depressors of the cornea, it must follow that in every case of hypermetropic internal squint the deviation is oblique, and a purely lateral turning is theoretically impossible. Thus we observe an hitherto unstudied condition in concomitant squint, the existence of which can be readily proven. During fixation with the right, for instance, the left eye turns in and up—the right image will be the true, and the left, which is the false image, will be lower. During fixation with the left, the right eye turns in and up—the left image will be the true and the right, the false image, will be lower; or, while fixation is accomplished by one eye, which must be accommodated to give clear distant vision, but can not converge, the visual axis of the second eye crosses that of the first on a higher plane, and as accommodation and fixation are transferred from one eye to the other, the inward and upward squint is also transferred.

The same principle holds in its application to constant squint where one eye always fixes, and the other always deviates. Here there is no transference of accommodation or deviation, but the result of excessive accommodation in the better eye is manifested in the inward and upward deviation (eso-hypertropia)of the worse eye and is necessitated by the supra-normal response of the branches of the third nerve distributed to the muscles of that eye.

I have omitted a consideration of the action of the levator palpebræ, which, belonging to the group of muscles supplied by the motor oculi, should also receive additional stimulus from hypermetropic excitation of its nucleus. Its function, however, differs from that of the other members of this group of muscles, and, while its over action in hypermetropia would be important as showing the physiologic relation of all the nuclei, it is independent of, and not kindred to, rotation of the ball. A slight increase in the vertical axis of the commissure in the squinting eye over that of the fixing eye might be difficult to determine, since the halves of the face are seldom symmetrical. The application of this extension of Donders' theory of hypermetropic squint to the treatment is obvious. It is essential that a full correction of the error of refraction shall be constantly worn, from the moment the diagnosis can be made, or the patient is old enough to wear glasses. In lieu of glasses the accommodation can be paralyzed by atropin.

The surgical treatment consists of: 1, in alternating squint, a division of both internal muscles; 2, in constant squint, a division of both internal muscles, and the superior rectus of the deviating and perhaps the inferior rectus of the fixing eye.

The degree to which the tenotomies should be carried must be governed by the distance separating the false and true image of a small light at six m. Hence it should be done in all cases, where a restoration of binocular fixation is possible, under cocain anesthesia.

Failure to secure good results from operation will often be encountered in cases of constant squint, because division of the interni will not correct the hypertropia, and it is essential to the permanency of even a cosmetic effect that the upward deviation shall be recognized and considered of equal importance to the horizontal. In concomitant squint, the hypertropia is a transient and alternating condition, transferable with the esotropia, and should *never* be surgically treated. By equalizing the convergence by tenotomies, binocular fixation is secured without interfering with the horizontal plane on which the two eyes will act together. This plane may be higher than that of the emmetrope, or after a period of normal accommodation, obtained by wearing full correction for hypermetropia, the elevators of the cornea may be properly and equally antagonized by the depressors and the horizontal plane of binocular fixation be lowered to correspond with that in emmetropia. In either case the visual axes are on the same level.

I earnestly urge, first, an examination and close analysis of the degree and kind of turning of the cornea by a study of the relative positions of the false and true image of a small gas jet or candle flame at six m. and shorter distances; second, a recognition of the hypertropia which will be invariably found to complicate esotropia, of its transference with the esotropia in concomitant or alternating strabismus; third, of the permanent upward deviation of the inward-turned eye in constant squint; and, fourth, emphasize the deductions taught by these conditions, namely, that the hypertropia of the former disappears under correction of the error of refraction and tenotomy of the interni, and in the latter, vertical equilibrium can be obtained only by operation on the vertical muscles.

SOME REMARKS ON TOTAL EXTIRPATION OF THE FIBROID UTERUS: ILLUSTRATIVE CASES.

A paper read before the Ohio State Medical Society, Zanesville, May 16, 17, 18, 1894.

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The subject of fibroid tumor of the uterus is too broad to be considered in all its aspects, in the time allotted, before this Society. I have therefore thought it advisable to speak of but two phases of the subject: 1, what cases require operation; 2, methods of operating.

Clinical experience demonstrates that only a small percentage of those suffering from fibroids require operative interference for relief. This is so well known that the profession at large have come to regard them as purely innocent growths. This is true in the majority of cases. My experience, based upon more than two hundred carefully recorded cases, justifies me in saying that the majority of women from thirty-six to forty-five years of age suffering from fibroid tumors, do not require operative interference; but this fact increases our responsibility in determining early the cases really requiring operation.

A great many women who are the subjects of fibroid tumor suffer no more inconvenience than a slight pain preceding and during the menstrual period, which is not excessive or unduly prolonged. They suffer but little, if any, from pressure symptoms or peritonitis, and the tumor only annoys them because they are conscious of its presence by manual manipulation or from information given them by their phy-

sician. As long as the patient remains comfortable and her general health is not interfered with by pressure or loss of blood, she certainly ought not to be subjected to an operation.

The chief symptoms and secondary diseases of cases requiring operative interference, are hemorrhage, pain, cystitis, peritonitis and pressure causing temporary intestinal obstruction. These cases when they do not yield readily to internal medication combined with thorough curetting, the patient being put under good hygienic surroundings, are to be looked upon with suspicion and the future progress of the case watched with unusual care and interest. Experience leads me to believe it is out of this latter number, where the symptoms can not be easily controlled, that almost all of the operative cases come. I do not mean by this statement that all of these cases should be at once subjected to the radical operation of hysterectomy, but I wish to emphasize the opinion that these cases should be carefully watched. It is not unusual to have a case referred for operation where there has been severe and frequent hemorrhage with metrorrhagia lasting from ten to fifteen days each month for a number of years. To say that these patients are in the most unpromising condition for such a radical operation is to repeat what you all know. They are exsanguinated to an extreme degree.

Three cases operated upon by me within the past year, although still able to walk had lost such large quantities of blood that the act of rising to the feet caused severe vertigo. They suffered but little pain at any time, but had been confirmed invalids for years. They had had all kinds of internal medication, combined with electricity, before they were referred to me, with the result of only lessening the hemorrhage, not controlling it. These cases illustrate in a forcible manner the point I wish to emphasize; that is, if hemorrhage and metrorrhagia can not be controlled within a few months by careful medication, that case should be referred for operation and not be permitted to become so enfeebled as to make the result of the operation problematical. In other words, if once a patient becomes a bleeder she nearly always continues to be a bleeder, and there is no permanent relief except by operation.

There is another class of cases in which the most prominent symptom is not hemorrhage, but pain from pressure of the tumor. A tumor the size of a cocoanut, which has become adherent in the pelvis from inflammatory exudation, may cause intense suffering and a great number of reflex symptoms which demand relief. In support of this I could cite many instances of which the following is a fair illustration:

Miss M., aged 40, referred by Dr. Rhu, of Marion, Ohio, was known to have had a fibroid tumor for more than three years. For one year before my visit she observed that she was growing more and more incapacitated for walking. When she attempted to walk she suffered from a sense of fullness in the pelvis and pain in the legs and head. Much of the time she was practically disabled, so far as locomotion was concerned. She could not walk across the street without causing pain in the legs which was at once reflected to the head, so that she suffered greater pain in the head than in any other part of the body.

I saw the case in consultation with her physician, March 12, 1893, at which time she was just recovering from a sharp attack of peritonitis. On examination, I found the tumor occupying the entire space in the pelvis, with a large nodule above and to the left side, wedged down, firmly fixed by adhesions and causing great pressure. It was evident the patient could only be relieved by the removal of the tumor. As her life was in danger from recurring attacks of peritonitis, I advised immediate removal. Total extirpation was made at my private hospital, March 16, 1893. The entire lower part of the tumor was adherent. After removal, the tumor somewhat resembled in shape two large cocoanuts joined together. The patient made a prompt and uninterrupted recovery and is now enjoying excellent health. By examination of the tumor, we found a good explanation of the cause of the pain complained of when the patient attempted to walk. The tumor filled the pelvis, where it had become firmly adherent to its walls, the resulting pressure on the nerves of the sacral plexus causing the pain in the legs and inability to walk. The pain in the head was a reflex from the same cause. As the tumor continued to enlarge, it could do so in only one direction, upwards. The weight from above when the patient attempted to walk was an additional source of pressure on the nerves, which was somewhat relieved when the patient lay down. It is hardly necessary to add that this patient had been under constant medical treatment, including electricity, for years before the operation.

That we may have cystitis from the pressure of a fibroid tumor alone, is well illustrated by the following case:

Mrs. K., Dayton, Ky., age 36, married eight years; no children; no miscarriages; referred by Dr. Richards. This patient had suffered several years from pelvic pain, backache, pain in the limbs and metrorrhagia. She did not consult a physician until about a year ago when she was compelled to do so for relief from an irritable bladder. She was not conscious at that time that she had a fibroid tumor, but her physician was not long in determining the cause of the bladder difficulty, which was pressure on the bladder from a fibroid tumor filling up the true pelvis. No medication relieved this tormenting trouble, which gradually grew worse until she developed cystitis of an aggravated form. Her sufferings were very great. When she was referred to me for consultation, March 2, she had not been able to retain her urine for longer than one hour at a time, for more than two months. The tumor was fixed in the pelvis and could not be pushed upwards. Total extirpation was advised and the patient readily consented. It was done March 6. The patient made an easy and prompt recovery; her bladder difficulty improved from day of operation and at the present time she holds her urine for five hours and suffers but little inconvenience. I have no hesitation in saying that in due time she will be perfectly relieved.

Peritonitis is to be dreaded even more than hemorrhage in these cases. My experience convinces me that in almost every case we have the two conditions present. We have periodical hemorrhages extending over long months, or even years, with more or less severe pain located in one or the other ovarian regions, or in both, gradually increasing from month to month, until finally the patient is attacked with acute general peritonitis from which she may or may not recover. This inflammation will recur on the slightest provocation. These cases should be operated upon at the first attack, and not be permitted to go on and have half a dozen or more recurrences, each one jeopardizing life. The cause of peritonitis in these cases, in almost every instance, is a pyosalpinx, a suppurating ovary or both, complicating the fibroid, and it is obvious to every one that the only rational treatment is an early operation. This should be insisted upon in every case at the first attack of peritonitis. The following case illustrates this condition:

Mrs. N., age 52; married thirty years; no children; referred by Dr. DeWitt. The tumor extended three inches above the umbilicus. The patient had been conscious of the existence of the tumor twelve years, but had suffered but little inconvenience until about three years before the operation, when she commenced to have irregular hemorrhages which gradually grew worse, but she would not consent to an operation. For about a year she had suffered considerable pain in both ovarian regions and the hemorrhage had been markedly increased. The patient lost much

flesh, was anemic and very weak. I saw her on May 20, 1893, when she was just recovering from a sharp attack of peritonitis of some fifteen days' duration. Total extirpation was made May 23, 1893. Extensive intestinal adhesions were found; a pyosalpinx and large suppurating ovary holding eight ounces of pus, which was imprisoned below the tumor in the pelvis, were removed with the uterus. The patient made a prompt recovery and is to-day enjoying perfect health.

That intestinal obstruction should be one of the complications which might be anticipated in these cases is plainly evident. A small tumor fixed in the pelvis causes intestinal obstruction by narrowing the lumen of the rectum. This symptom can be overcome in the majority of cases after a few days' careful medication, yet the temporary obstruction is almost always accompanied by an acute attack of peritonitis, thereby endangering the life of the patient, as the following case will show:

I was called in consultation with Dr. Van Meter on May 7, 1894, to see a patient, a strong, healthy-looking German woman 38 years of age, who has been known to have a fibroid tumor for two years. One year ago she had an attack of peritonitis with complete intestinal obstruction for five days; for twelve hours the patient had stercoraceous vomiting. The tumor was so firmly packed in the pelvis, compressing the rectum to such an extent that the finger could not be pushed by the tumor. The intestinal obstruction was finally overcome, only to have it occur again May 1 of the present year. Obstruction was complete for four days, and was accompanied by acute general peritonitis from which the patient is now slowly convalescing. An operation was advised for removal of the tumor but not assented to. This patient has obstruction from pressure of the tumor in the pelvis, against the rectum; without operation she will die from this cause at no distant day.

Just as the question of extra-peritoneal or intra-peritoneal treatment of the pedicle in hysterectomy was so hotly contested a few years ago, so now is total extirpation and the extra-peritoneal method being discussed.

The extra-peritoneal fixation of the stump had the advantages over other methods, used at that time, of controlling hemorrhage and yielding the best results. It therefore became the method that was almost universally adopted. The objections to this method are many and serious. If we use the extra-peritoneal method and clamp, we not infrequently see the pedicle slough and become a menace to the life of the patient for days afterwards. Not a few die from septic infection and peritonitis from this cause. If the patient makes a primary recovery, she is not in all cases restored to health. Quite a number of these patients suffer great pain afterward, owing to the dragging of the pedicle on the tender abdominal scar, and pressure upon the distorted pelvic organs, interfering with their functions. Not infrequently hernia follows this operation, developing at the point of the fixation of the pedicle. Last and by no means least, the prolonged and painful convalescence which necessarily follows this method is a very serious objection to it.

The new methods which have entered the field and are contesting for supremacy in the hands of leading operators to-day are, total extirpation, and Baer's method. Baer's method is extirpation of the tumor and body of the uterus, ligating the uterine arteries, leaving the cervix and closing the peritoneum over it. Both of these methods have their advocates, but as yet total extirpation has yielded the best results and is the method which I prefer above all others. While I am aware of the fact that I have not had as much experience in this line of work as some operators, yet I have removed the uterus, for all purposes, sixty times, and so feel justified in expressing my opinion upon the subject.

The difficulties attending total extirpation are not so great as one who has never attempted it would suppose. They are easily overcome by one accustomed to performing difficult and complicated pelvic operations. With the patient in Trendelenberg's posture, the time required to perform the operation is no longer than that required in making many of the difficult abdominal and pelvic operations now being performed daily. After ligating off the ovaries and dividing the broad ligaments, the peritoneum is divided across the front of the tumor just above the top of the bladder and across the back of the tumor somewhat lower down. The peritoneum is then stripped down in front of the bladder and separated from the tumor down to the vagina. After stripping the peritoneum from the back of the tumor, the uterine arteries and their branches are easily secured. The ligatures are placed between the two flaps of the peritoneum but do not include this membrane in their grasp. The number of ligatures does not usually exceed two or three on either side. One end of each should be left about six inches long and, after removal of the cervix, carried out through the vagina to be cast off through that passage. The vagina is lightly packed with gauze and the peritoneal edges which were stripped from the tumor are turned in towards the vagina and neatly coapted by a running stitch of catgut. The wound in the vagina is treated as after an ordinary vaginal hysterectomy.

This method has stood the test of experience and is gaining in favor with the best operators of the present time. Theoretically there is little to be desired in technique, as it is very near perfection. It promises as good results in patients with thick abdominal walls as in those with thin abdominal walls. This can not be said of the extra-peritoneal method.

By total extirpation there is not as much danger of hemorrhage as there is in ovariotomy, from the fact that in the latter operation the pedicle is transfixed and ligated in mass. Not infrequently the pedicle is thick and short with great tension upon it, favoring slipping of the ligature and consequent hemorrhage. In total extirpation the broad ligament is divided from the uterus and ligated in sections which are not put upon the stretch, so there is no danger of the ligature slipping off. The ligatures do not include any uterine tissue, therefore the tissue within the grasp is not susceptible to any undue shrinkage and resulting hemorrhage. There is no raw surface left in the peritoneal cavity to form attachments to intestine and omentum. There is no sloughing of the pedicle. There is no distortion of the pelvic organs from the stump being fixed to the abdominal wall, pressing upon the bladder, or interfering with the bowels. The risk from hernia at the point of fixation of the pedicle is entirely obviated. There is a comparatively painless convalescence which is at least two weeks shorter than that of the extra-peritoneal method. And here I wish to reiterate what I said in my first report on this subject, read before the Academy of Medicine in December, 1892. That I was convinced that this method had come to stay, and that the clamp in abdominal hysterectomy would as certainly be a thing of the past as it is now a thing of the past in ovariotomy.

In conclusion, I wish to say that with the present

low mortality following total extirpation of the fibroid uterus, we should not hesitate to advise all patients who are subjects of fibroid tumor to submit to the operation at once, if their life is endangered or health destroyed, either from the tumor or complications arising from it.

WOUND OF LEFT SUBCLAVIAN ARTERY.

Read before the Southeastern Kentucky Medical Society, at Stanford, Ky., April, 1894.

BY J. N. BAUGHMAN, M.D.

FLAT LICK, KY.

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On the afternoon of Nov. 7, 1893, Charles Haywood, aged 19 years, was stabbed in the left side of the neck about one and one-half inches above the clavicle and about two inches from sternal end of clavicle. The knife, which was an ordinary pocket knife about three inches in length of blade, going downward, backward and inward, wounding the subclavian artery in its first division; as to the nature of the wound of the artery, we were unable to tell, but are of the opinion that the knife punctured the vessel. Dr. James Steele and myself saw the case in about two minutes after the wound was received. The red arterial blood was spurting out of the wound in a stream half as large as one's finger and to the distance of about one foot above the boy's head. He was reeling from the shock and the sudden loss of so much blood, and was in what I thought a dying condition. We caught the boy, and by direct pressure, and from his fainting, stopped the blood. Dr. Steele continued the pressure while I went for styptics to my drug store, which was right at hand. The wound was packed with absorbent cotton saturated with Monsel's solution until we could get instruments, etc., to attempt to ligate the vessel, and while we were attempting to do so, we prevented hemorrhage by pressure against the vertebral column. We enlarged the wound but after repeated efforts were unable to reach the bleeding vessel, it being so deeply seated. We saturated absorbent cotton with Monsel's solution and packed it over (*not in*) the wound and held it until a firm clot was formed and the entire mass adhered firmly to the boy's neck and effectually stopped the bleeding, but it made a very ugly and bunglesome mass of blood and cotton. The patient was now resting very easily, and it being dark we decided not to disturb him until morning, when we would be better prepared to again try to secure the vessel.

Dr. B. F. Herndon saw the case with us next morning, November 8, and we decided that as we had the hemorrhage stopped it would not be wise for us to interfere with it, by again trying to secure the vessel and also having the fact staring us in the face that in all probability we would again fail, and even if we did succeed in tying the vessel our patient would be almost sure to die during the operation or soon after; lastly, the friends were unwilling for us to do so, unless we could give more hopes of success.

We had to relieve the bladder with the catheter for several days. We applied Listerin to the mass on the wound every day and by so doing were enabled to keep down all offensive odors, and had the wound entirely cut off from the atmosphere. The patient had scarcely any fever and the circulation was kept regular with digitalis and aconite. The pupil of left eye was widely dilated and remained so for about two months, when it became normal, and has continued so. The reason of this is supposed to have been on account of the wound being so near the origin of the vessel that it interfered with the circulation in the left carotid artery. A slight abscess also formed in the right ear and discharged for some two weeks a non-offensive pus, but then ceased to give any further trouble.

The second day after the wound was received, we washed the patient thoroughly, except the wound, which was not interfered with until November 19, when the coagulum, cotton, etc., was thoroughly softened with warm carbolized water, and removed, when the wound seemed to be in the very best condition. The entire wound was filled with healthy granulations and we thought our patient would soon be well. The circulation in the left arm was much improved, having been reduced to the minimum when the injury was first received, but the left arm was almost useless and has remained so ever since and is much smaller than its fellow.

When we dressed the wound we saturated absorbent cotton with Monsel's solution and laid it over the sore, Dr. Gross saying it is one of our best antiseptics, and this being the case we would thereby get a double effect from its use. The patient seemed to be doing splendidly until November 24, when we again dressed the wound which was suppurating slightly and not of the most healthy nature. There was a very slight depression in the lower angle of the wound, which was gently dressed with carbolized water and then a linen cloth covered with vaselin was placed over it. The patient was left lying upon his back, in which position he had been from the beginning, and with his head slightly rotated toward the right side. The next day, November 25, the patient became uneasy and had forebodings that he was not going to recover. He also had some fever and his pulse was a little fast. We cheered him up as best we could and left him. Both Dr. Steele and myself lived near where he was.

On Sunday morning, November 26, about 4 o'clock, we were both aroused with the information that the boy was bleeding. Dr. Steele, being endowed with the happy faculty of going into his clothing head foremost, was upon the scene in about three minutes and found the boy had almost bled to death, and he ran to my residence and store for Monsel's solution, which with us in this particular case was a cure all. When we returned the boy had fainted, the hemorrhage had ceased and he was not dead, but was so near the brink we thought we would soon be relieved of our charge.

Dr. Erichson says: "After the first secondary hemorrhage the surgeon may, and after the second he must use heroic measures to stop it." We were inclined to cut down upon the artery and tie it at all hazards, even in the face of the record that there had never been a successful case of this kind, but the friends of the patient objected. Our patient soon rallied and was doing as well as could be expected until December 8, when we were again startled by the cry: "The boy is bleeding!" Luckily for the patient and also for ourselves this was soon after daylight, and Dr. Steele and myself were both up and were enabled to be at the patient's bedside in less than three minutes from the time the hemorrhage began. We

packed the wound with absorbent cotton saturated with Monsel's solution and this, coupled with the boy's fainting, stopped the hemorrhage before damage enough was done to produce death.

At each bleeding he had lost nearly a half gallon of blood and was now in a most deplorable condition; it seemed as if there was no possible chance for his recovery. The friends objected to our again trying to ligate the artery, for while we told them there was no other remedy, we also informed them of the fact that no one had ever recovered from an operation of this kind. In a few days after each hemorrhage, our patient would rally from the shock and loss of blood, and with the exception of constipation which had to be relieved by injections, would be doing nicely for from eleven to fourteen days when he would again have a hemorrhage which would only be controlled by the timely arrival of his medical attendants and from the syncope which resulted in every hemorrhage but one; this time the blood issued in a small stream, and he did not lose over one and one-half pints. There were in all, six hemorrhages, and the patient lost some two or three gallons of blood, but would recuperate from each one so he would live through the next.

After the last hemorrhage he was in a truly deplorable condition, suffering fearful agony and could only be kept easy by giving enormous doses of morphia. There was a good deal of nausea. The last hemorrhage was about the fifteenth of January, 1894, and the patient's neck is now (April 19) and has been for two months entirely healed. It is impossible to know the condition of the artery, but fears are entertained that an aneurism may develop at any time. The patient is now cheerful and able to be sitting up, but from the great anemia he is very weak, and it will be many months before he is well, if such an event should ever occur. Within the last two months he has suffered a great deal from the passage of renal calculi, but now seems to be improving, though he still has some pus in his urine at times. However, he does not suffer from the attacks of renal colic nearly so often as he did a few weeks ago. He has suffered a great deal from general neuralgic pains, and has had one or two swellings of left knee and ankle, but this would only last for two or three days.

One fortunate circumstance is that the patient has never sneezed or coughed since he was wounded. This was one thing we feared, for had it happened it would almost certainly have precipitated another hemorrhage.

We only dressed the wound when we were absolutely forced to do so, but by having the air excluded by packing over it absorbent cotton and Monsel's solution we were enabled to keep it in an aseptic condition, and we applied Listerin over and around the dressing every night and morning.

ADDENDA.—At this date, May 23, the wound is firmly healed and no *bruit* can be heard, which shows the artery to be well healed, with no indication of any aneurism, but the patient is still in a very feeble condition, having to be helped up and down. The left arm remains useless but the circulation in it is good. The patient still continues to pass renal calculi and no treatment seems to abate it in the least. It is evident to my mind the boy will always be an invalid which is due to the great amount of blood lost. As far as the wounded artery is concerned it has successfully healed, which is something wonderful, and so far as I have learned has never before occurred in so large a vessel. A wound at this point has never recovered save in one case, that of Dr. Dunlap, of Danville, Ky., when he ligated the first part of the left subclavian artery in a negro boy at a Philadelphia hospital. In his case, he tells me, the left arm was useless the same as the above, and the pupil of the left eye was dilated for some time but finally became normal.

SOME OBSERVATIONS ON THE DISEASES OF THE ALIMENTARY CANAL AND THEIR COMPLICATIONS.

Read before the Missouri State Medical Society in convention at Lebanon, Mo., May 16, 1894.

BY PAUL PAQUIN, M.D.

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The diseases of the alimentary canal may be divided into two general classes: The primary and the symptomatic; the primary, in its turn, may be subdivided into specific and non-specific affections. The symptomatic include a variety of morbid conditions too numerous to enumerate. It is my purpose in this paper to make a few general remarks on the morbid conditions in general which affect the alimentary canal, and the complications which are frequently noticed in connection with them.

The primary diseases of the digestive apparatus under the two subdivisions just mentioned include everything, from such serious specific maladies as cancer, tuberculosis, typhoid fever, cholera, etc., to those often confused conditions considered more simple, as indigestion, dyspepsia, etc. I do not wish to be understood, however, in making this classification of the primary diseases of the alimentary canal, that all the diseases usually listed under the title of non-specific, are such in fact; if all diseases due to microbes are specific, there are many more affections of the bowels that deserve this title, than is usually granted. But in the present state of the medical mind, we are justified in terming non-specific a variety of indefinite or definite, microbic affections, causing more or less serious disturbances, but not usually affecting the substance of any organ to a marked degree.

Of the symptomatic or secondary diseases of the alimentary canal, much could be written. A great number of nervous diseases, for instance, produce or favor the development of morbid conditions in the digestive tract. It is so with a number of affections of certain organs of other apparatus; diseases of the lungs, throat, nasal cavities, the liver, kidneys, for instance.

On the other hand, there are certain forms of diseases of the digestive apparatus which result in complications in other organs or sets of organs, principally in the nervous system, the kidneys and the apparatus of circulation.

Until very recently, the diagnosis and treatment of the majority of the diseases of the alimentary canal was more or less empirical. Conclusions were reached from external symptomatic evidence and from the history given by the patient, and treatment was usually based exclusively on such slim grounds. Indeed, this course is prevalent now, very extensively. It is no wonder, therefore, that so many of the diseases of the alimentary canal which at first

seem slight become rebellious and chronic and sometimes never yield to treatment. The digestive apparatus being, as it were, the soul of the machine, *i. e.*, the furnace manufacturing the material for the energy of the economy, is the set of organs that should be most properly and faithfully cared for. As a matter of fact, there are no parts in the human body so greatly abused by the individual, the cook and the polypharmacist of the medical fraternity.

Bouchard, Dujardin-Beaumetz, Matthieu in France; Ewald in Germany; Jaksch, of the University of Prague, and Cagney, of London, have by their extensive researches and experiments established grounds for clinical diagnosis of those maladies, which are of the utmost value for those who devote serious attention to the diseases of the alimentary canal. In the first place, they have given us some reliable means of chemic, microscopic and bacteriologic analyses of the contents of any portion of the alimentary canal, and of those products of the urinary secretions which result from disturbances of this apparatus. They have also established rational grounds for the prescription of rational dietetics, formulated with special reference to any given disease in an individual. Finally, they have given us successful means of treatment which were never before used and which we find, even now, difficulty in bringing to the favorable notice of the medical profession of our country, particularly in the West. Indeed, it has been my misfortune to have heard reputable physicians scoff at the idea of trying to diagnose obscure maladies of the alimentary canal by clinical analysis, and treat them by the new methods of the French, German and English, and the Eastern Americans. I have heard some decry even the use of the stomach tube, which is more harmless than the catheter, and ridicule the idea of the utility of intra-intestinal and intra-stomachal electricity. The very same men would affect to believe that intestinal disinfection is, likewise, a theory that can never be applied usefully in practice. There can be but two excuses for such views to-day: Either ignorance of the advanced methods of diagnosis and treatment of the diseases of the intestinal apparatus, or indolence when it is found necessary to go through a long, tedious process of exact analysis and protracted treatment. It is much more convenient, in fact, to write a prescription on an assumption acquired from a cursory examination than to take some days in making the examination, and some weeks or months in irrigation and disinfection, or other treatment of the digestive organs.

The first indication in a given malady is to find its origin and its cause. The next, whether it is complicated or not. These precepts apply emphatically to the digestive maladies. To arrive at these facts one must go systematically through the methods of examination. In the majority of cases, first, the buccal cavity should be examined with reference to the microörganisms and other morbid evidences that may be found there, such as coated and furred tongue, foul breath, etc. It should be noticed also whether there exists any nasal catarrh, with secretions running down into the stomach. Then, if it presents any evidence of morbid phenomena (and sometimes when it does not, positively) the stomach itself, should be examined: 1, as to its dimensions and physical conditions, to establish whether or not it is dilated or hypertrophied, and whether pathologic lesions or a growth exists; 2, as to the reaction of the stomach contents, and their nature from a bacteriologic standpoint; 3, as to the capacity of the stomach secretions to digest albumen and the effect of the digestive juices on starch and other substances (sometimes it is even necessary to establish the absorption, capacity and the motility of the stomach itself;) 4, as to the existence or non-existence of stenoses or strictures of the cardiac or pylorus orifices. If there are indications we should then examine especially with reference to cancer and ulcers.

In another class of morbid conditions we are first led to examine the stomach to establish whether or not its coats are inflamed, whether the contents contain living microörganisms, and whether there exists catarrh of the stomach. In still another class of diseases we find ourselves in the presence of indications of certain neurotic conditions, as hysterical gastralgia; genuine gastralgia, as a result of the diseases of the central nervous system; neurasthenic gastralgia of the irritating and depressing varieties; hyper-acidity of the gastric juice; nervous vomiting; cramps of the stomach; paresis of the cardiac orifice; nervous anacidity of the gastric juice, which necessitates most of the tedious inquiries just mentioned for a safe diagnosis. Finally, having satisfied ourselves as to the origin and nature of the disease by these investigations, it may be found necessary (and sometimes before the investigation we have to take into account) the relation of the diseases of the stomach to those of other organs. It is here that we have to deal with symptomatic intestinal disturbances and complications. We find them appearing in tuberculosis, in valvular diseases of the heart, in diseases of the kidneys, the liver and the central nervous system, diabetes, rheumatic diathesis, etc.

The examination of the intestines is made on the same general line indicated for the stomach. We first proceed to the physical examination and then to analyses as accurate as possible, including the chemistry, bacteriology and microscopy of such intestinal contents as may be deemed wise to investigate. Our investigations should be made with a view of determining: 1, the physical conditions; 2, whether or not microörganisms play any part in the production of the morbid phenomena presented, what organic lesions, if any, may be revealed in the dejecta. We should establish the form of the intestinal irritation, the nature, if deemed necessary, of the microbes found in the bowels, the kinds of food that fail of digestion, the chemical products of intestinal putrefaction and other kinds of fermentation, the evidences of auto-intoxication that may be presented, the nature of the mucus, if any, expelled, etc. Nor should we stop our analysis here; we should test the urine thoroughly, not only to exhibit its density and reaction or to establish the presence or absence of albumen or sugar, but also with a view of discovering whether any of the intestinal products, due to diseases of or fermentation in the intestines, are excreted with the urine. Having thus carefully gone through the processes necessary to make a safe diagnosis of any given morbid condition of the alimentary canal, we have most important data on which to base treatment.

Generally speaking, most of the diseases of digestion are more or less complicated, or aggravated, at least, by the action of microörganisms; therefore, in

the majority of cases, it will be found of the greatest utility to irrigate the stomach and the colon, and then disinfect the small intestines by the use of such antiseptics as will reach them without losing their power and with the least irritation, and begin at that point to arrest the growth of ferments. This general treatment is applicable, usually, not only in all diseases in which there is so-called dyspepsia, with the exception of cases of cancers and ulcers—in which modifications are necessary—but is applicable also in typhoid fever, in Asiatic cholera, cholera morbus, and in innumerable other morbid conditions of the digestive tract that every physician needs to understand well, and that may occur independently or in connection with some other affections. The stomach tube, for the pure or medicated lavage and disinfection of the stomach plays a most important part. By its use, gallons of water can be used each day or each sitting. The following medicinal agents may be used with advantage in the disinfection of this organ:

ROSENHEIM'S SOLUTION FOR LAVAGE OF THE STOMACH.

Borax	2 drachms.
Creolin	4 grains.
Salicylic acid	18 "
Thymol	4 "

Use with a syphon tube after clear water lavage, once a day for disinfection.

COMPOUND CINNAMON AND CITRIC ACID LAVAGE.

Pasteurine, (composed according to published formula and analysis, of cinnamon, citric acid, gaultheria, witch hazel)	2 ounces.
Water	1 quart.

Use with syphon tube as preceding prescription. Either of these formulas may be used in lavage of the colon.

For the small intestines and for continual disinfection, calomel may first be used in doses varying from ¼ to 3 or 5 grains, preceded and followed by an alkalin laxative and then by the long use of acid antiseptics, as Pasteurine, or the use of other products arresting aerobic and anaerobic germs, as naphthol, benzo-naphthol, which spend their force particularly in the small intestines. The stomach and lower bowels can be irrigated with water, medicated or not, with the agents just mentioned, using for the purpose a colon tube four or five feet long. I need not say that the intestinal elimination as well as kidney elimination, should be rendered and continued as perfect as possible. The free use of pure water, hot or cold, is for this purpose, very beneficial. The elimination may be assisted otherwise by medicinal agents as may be deemed best under the circumstances.

There are a number of conditions of the stomach and bowels that can be materially improved and sometimes cured by the proper use of electricity. It is, to-day, practicable to introduce an electrode into the stomach. Having filled it partly with water an electrode is introduced into the stomach, and the other one is applied externally wherever wanted. Galvanism and faradization may thus be produced with perfect safety. The same process of electric treatment, involving the whole length of the canal from the stomach to the rectum, may be used with one pole in the stomach and the other in the lower bowels, thus passing a current longitudinally through the tract. In various forms of atony of the digestive tube, this kind of treatment was found particularly useful.

All these new methods, however, would avail little for permanent cure were it not for the proper use of dietetics, during and sometimes after the treatment. It is here that the knowledge of the physician in the composition and the physiologic digestion of food is taxed to its utmost capacity: for one can not always prescribe a diet with the assurance of getting favorable results, without being well versed in these branches. Furthermore, it is absolutely necessary in many cases to be acquainted with the physiologic, chemic and bacteriologic condition of the alimentary canal to understand what phenomena must take place when foods of a given kind shall reach it. The haphazard diet that we usually find prescribed in many cases is often fraught with danger or, at least, very commonly produces disturbances more serious than existed before treatment. Very few in general practice would agree, for instance, in giving to the stomach complete rest from any kind of food for as long as six, seven or ten days in the case of catarrh of that organ, feeding the patient during all that time with pre-digested food by colon enemata, and yet this is precisely what is done occasionally in aggravated forms of this disease, and with the very best success.

The greatest difficulty that we find in the way of treating diseases of the alimentary canal by improved methods is that so many object to the use of the stomach tube, fearing its introduction into the organ, because it produces nausea and sometimes a sense of choking; and physicians who will not use this method have encouraged this repulsion and thereby robbed many a patient of this one means of salvation, until no remedy could be successful. On the other hand, I have met practitioners who had used the tube for awhile and stopped it for no other reason than that one or two patients never came back, and the doctors lost that much revenue.

I submit, that since the evidences are eminently in favor of most of the modern improvements and methods of diagnosis and treatment of the diseases of the digestive apparatus I have mentioned, it behooves every physician to give them careful attention. True, it requires time and apparatus, but in the matter of reaping satisfactory results it will pay, although it may not yield much financially.

THE RISE AND FALL OF THE LICENSED PHYSICIAN IN MASSACHUSETTS.

1781–1860.

The President's Address at the Ninth Annual Meeting of the Association of American Physicians held in Washington, May 29, 1894.

BY REGINALD H. FITZ, M.D.

BOSTON.

In calling to order the ninth annual meeting of our Association I desire to express the highest appreciation for the honor you have bestowed upon me in appointing me to preside over your proceedings. To conduct the affairs of so aristocratic a democracy has been made a task so easy that the gift of persuasion, or the knowledge of parliamentary law become wholly unnecessary qualifications. The one obligation which has weighed somewhat heavily is the thought of the opening address which is to prepare the way for such communications as you are to make for the advancement of scientific and practical medicine—all the more as my own attention has been particularly directed for the past few months toward a class of practitioners who have no idea of scientific medicine, and whose only thought of the practice of medicine is how much money can be made out of it.

It may not be uninteresting to learn what men like yourselves, many years ago, did in order to discourage such persons—what they planned, what they accomplished, and why they failed. I will, therefore, ask your attention to the rise and fall of licensed physicians in Massachusetts, 1781–1860.

In the "Records of the Governor and Company of the Massachusetts Bay in New England" (1854, III, 153), is to be found the first legislation concerning the regulation of medical practice in Massachusetts. On May 3, 1649, the General Court, held at Boston, voted as follows:

"Forasmuch as the laws of God (Exod: 20, 13) allowes no man to touch the life or limme of any pson except in a judicyall way, bee it hereby ordered and decreed, that no pson or psons whatsoeuer that are imployed about the bodyes of men, woemen, and children for preservation of life or health, as phisitians, chirurgians, midwives, or others, shall presume to exercise or putt forth any act contrary to the knowne rules of arte, nor exercise any force, violence, or cruelty vpon or towards the bodyes of any, whether young or old,—no, not in the most difficult and desperate cases—wth out the advice and consent of such as are skilfull in the same arte, if such may be had, or at least of the wisest and gravest then present, and consent of the patient or patients, (if they be mentis compotes,) much lesse contrary to such advice and consent, vpon such punishment as the nature of the fact may deserve; wch lawe is not intended to discourage any from a lawful vse of their skill, but rather to encourage and direct them in the right vse thereof, and to inhibit and restrayne the presumptuous arrogance of such as through prætidence of their oune skill, or any other sinister respects, dare be bould to attempt to exercise any violence vpon or towards the bodyes of young or old, to the prejudice or hazard of the life or limme of men, woemen, or children."

Until the years immediately preceding the War of the Revolution there was no more stringent regulation of medical practice than this. But in 1760 the City of New York had found it necessary to regulate the practice of medicine within its limits on account of the abundance of quacks preying upon the community. Five years later the Medical School of the University of Pennsylvania was established, and in the following year the New Jersey Medical Society was founded. In still another year the Medical School of Columbia College began its career; and in 1771 the colony of New Jersey passed its act regulating the practice of medicine, to be followed in 1774 by the abortive attempt in Connecticut.

The years thus ripe in revolutionary ideas and acts produced their fruit in Massachusetts.

Although there were excellent physicians in the larger cities and towns of the Commonwealth, and several of them possessed medical degrees received in Europe, they were few and far between. Most practitioners had served merely a sort of apprenticeship to their seniors. There was no medical school in the State, and but two in the country, and these almost as remote as the leading schools of Europe at the present day. Any one undertook the study of medicine in such manner as he saw fit, and entered his practice with as little preparation as he chose. A considerable number of wholly unqualified practitioners thus were to be found, a source of danger to the community, a disgrace to the name of physician, and a cause of jealousy, contention and distrust among the members of the profession.[1]

The example set by New Jersey and New York was one which demanded a speedy following, and thirty-one of the leading physicians of Massachusetts, sixteen being from towns outside of Boston, became incorporated as the Massachusetts Medical Society, "that a just discrimination should be made between such as are duly educated, and properly qualified for the duties of their profession, and those who may ignorantly and wickedly administer medicine whereby the health and lives of many valuable individuals may be endangered, or perhaps lost to the community."

That this purpose might be carried out, the President and Fellows of the Society or their appointees from its members were given "full power and authority to examine all candidates for the practice of physic and surgery, who shall offer themselves for examination, respecting their skill in their profession, and if upon such examination, the said candidates shall be found skilled in their profession, and fitted for the practice of it, they shall receive the approbation of the Society in letters testimonial of such examination," etc. They were obliged, under penalty to hold this examination, although candidates were not obliged to present themselves for approval.

The State thus did not prevent the practice of medicine by any one, but it implied that the letters testimonial of the Society discriminated between the duly educated and properly qualified, and the ignorant and wicked. By the limitation of the maximum membership to seventy, admission to the Fellowship became a proof of distinction which the better educated and higher minded physicians were proud to attain. This number, furthermore, gave evidence of the comparatively few physicians in the State at that time, who were considered worthy of this high distinction. Indeed, it repeatedly happened in the early life of the Society that it was impossible to secure the attendance of a sufficient number of Fellows to form a quorum to transact business.

Two years after the incorporation of the Medical Society the Medical School of Harvard College was established; and it was feared that the power of Harvard College to examine medical students and grant degrees in medicine might interfere with the authority of the Society to examine candidates for practice and issue letters testimonial. According to the memorial of Dr. John Warren in 1811, this "would have produced the most unhappy effects, but for the repeal of an exceptionable article in that establishment, and the accommodating conduct of those who, at that time, were the guardians of science and the patrons of the healing art."[2]

But doubts arose with reference to the duties and powers of the Society concerning the examination of candidates and its authority to demand and receive compensation for its services, and an act in addition to the act of incorporation was passed in 1789. It was therein made the duty of the Society, "in order more effectually to answer the designs of their institution, from time to time to describe and point out such a medical instruction or education as they shall judge requisite for candidates for the practice of physic and surgery, previous to their examination before them. . . and they shall cause the same to be published in three newspapers in three different counties within this Commonwealth."

The Society continued to fail in its object to create a proper standard of medical qualifications. The population of the State rapidly increased, and the number of practitioners likewise. There was no sufficient inducement to lead physicians to apply for

[1] Proceedings of the Massachusetts Medical Society, 1831, 19.

[2] Dr. S. A. Green's Centennial Address, Med. Comm. Massachusetts Medical Society, 1875–81, xii, 639, 654.

the approval of the Society; and in the first twenty years of its existence only some twenty candidates had received the testimonials in approval of their professional skill.[3] In the same period Harvard had conferred its medical degree upon thirty candidates.

Early in the present century Dr. John D. Treadwell, a young, learned, devoted and public-spirited physician of Salem, impressed with the inability of the Society to accomplish its aims, endeavored to improve its usefulness. An extensive correspondence was instituted among the members and with the assistance of Mr. Sewell, afterward Chief Justice of the State, a bill was drafted which, somewhat modified, was enacted in 1803.

The Massachusetts Medical Society, as it now exists, was then instituted; and its plan of organization became a model for other State societies. It was no longer a close corporation with a limited membership, but it was possible for every physician in the State to become a Fellow. It was only necessary that he should have been a student in medicine agreeably to the regulations of the Society, and pass a satisfactory examination before the censors, after which he received a license to become a practitioner of medicine or surgery; "and after three years of approved practice in medicine and surgery, and being of good moral character, and not otherwise," he became a member of the corporation by subscribing to the by-laws.

The medical graduates of Harvard University were made licentiates without passing an examination, since the right to confer degrees had been granted Harvard College long before the Massachusetts Medical Society was incorporated. "The only means of avoiding collision with that ancient and respectable institution was by the compromise which was adopted."[4]

A duly licensed physician in Massachusetts in 1804 was required to give satisfactory evidence of the following qualifications before being admitted to examination for the license: Some acquaintance with Latin and Greek, and with the principles of geometry and natural philosophy; three full years of study under the direction of some respectable physician or physicians whose practice he must have attended. During this time he must have read the most approved authors in anatomy, physiology, chemistry, materia medica, surgery, and the theory and practice of physic. He was examined in physiology, pathology, therapeutics and surgery.

There was still no obligation on the part of any practitioner to present himself for license; and the only privilege enjoyed by the licensed physician, apart from the right to attend the meetings of the Society and the use of its libraries, was exemption from service in the militia.

Notwithstanding the Act of 1803 made it possible for every properly qualified physician to become licensed and a member of the Society, it proved necessary to take further steps to bring them within the fold, and in 1806 a by-law was passed in the following terms:

"To promote the laudable design of the Legislature, in forming and incorporating this Society, to prevent as far as may be all unqualified persons from practising medicine or surgery, and in order to discourage empiricism and quackery: it shall be deemed disreputable and shall be unlawful, for any Fellow of this Society, in the capacity of physician or surgeon to advise or consult with any person who having been a Fellow of the Society, shall be expelled therefrom, or with any person whatever, who shall thereafter commence the practice of medicine or surgery within this Commonwealth, until he shall have been duly examined and approbated by the censors of the Society or by those of some district society," etc.

The object of this by-law was to guard the public against ignorant, designing and unscrupulous pretenders. The Society had provided the means by which physicians could give evidence of having followed a suitable course of study, and it was its duty to inform the public that if it employed unlicensed practitioners it must suffer the consequences.

Notwithstanding these attempts at compelling practitioners to become educated physicians, the standard was evidently too high for all to attain. Many could not comply with the requirements; others did not find a sufficient inducement in the honors and privileges bestowed by the Society. The Thomsonians, then beginning their career, required no education and no license. There was no law to prevent their entering practice; and Chief Justice Parsons[5] had then made his famous decision in the case of the Commonwealth v. Thomson, "that if the prisoner acted with an honest intention and expectation of curing the deceased by this treatment, although death, unexpected by him, was the consequence, he was not guilty of manslaughter. . . . There is no law which prohibits any man from prescribing for a sick person with his consent if he honestly intends to cure him by his prescription; and it is not felony, if through his ignorance of the quality of the medicine prescribed or of the nature of the disease or of both, the patient, contrary to his expectation, should die."

The Chief Justice evidently felt that there was likely to be need of some legislation which should prevent the occurrence of such cases, for he closes his decision by saying:[6] "It is to be exceedingly lamented that people are so easily persuaded to put confidence in these itinerant quacks, and to trust their lives to strangers without knowledge or experience. If this astonishing infatuation should continue, and men are found to yield to the impudent pretensions of ignorant empiricism, there seems to be no adequate remedy by a criminal prosecution, without the interference of the Legislature, if the quack, however weak and presumptuous, should prescribe with honest intentions and expectations of relieving his patients."

In 1811 an unsuccessful attempt was made to incorporate a rival society with the same privileges as those enjoyed by the Massachusetts Medical Society, under the title of the Massachusetts College of Physicians. The announced reason was that two societies were better than one; the real object was thought to be the establishment of a new medical school.

The Massachusetts Medical Society strongly opposed the scheme, on the ground that it was unnecessary and would lead to the rejected candidates of the one society being accepted by the other, whatever might be their qualification, thus producing disagreements and animosities injurious to the profession and to the public.[7]

It is possible that in consequence of the recommendation of Chief Justice Parsons, certainly with the view of discouraging quackery which was rapidly increasing under the influence of Thomson, the Legislature in 1818 passed its first "Act regulating

[3] Dr. James Jackson's speech at the Annual Dinner, 1856.
[4] Proceedings Massachusetts Medical Society, 1831, 26.
[5] Massachusetts Reports, 1809, vi, 134.
[6] Op cit. p. 142.
[7] Dr. S. A. Green, loc. cit., p. 651.

the Practice of Physick and Surgery," which was supplemented in 1819 by "an Act in addition to an Act entitled 'an Act regulating the practice of Physick and Surgery.'"

According to the first of these Acts, no person entering the practice of physic and surgery within the State could recover by law any debt or fees for his professional services unless he had received a medical degree from some college or university, or had been duly licensed by some medical society or college of physicians, or by three Fellows of the Massachusetts Medical Society, designated in each county by its councilors, with power to examine candidates and grant licenses. Copies of these licenses were to be deposited with the clerk of the town, district or plantation in which the licentiate resided.

In the Act of 1819, that the physician might recover his debts by law, it was necessary that he should be a licentiate of the Society or a medical graduate of Harvard. If the candidate for the license was educated out of the State, the censors might waive a new examination if they were satisfied that he had received an education agreeably to the regulations provided by the Society.

It is stated [8] that this difficult trust was accepted with reluctance,[9] that the law was not sought for by the Society, and that it was doubtful whether its action was not rather injurious than beneficial. Of this law Chief Justice Shaw said:[10]

"It appears to us that the leading and sole purpose of this Act was to guard the public against ignorance, negligence and carelessness in the members of one of the most useful professions, and that the means were intended to be adapted to that object. If the power of licensing were given to the Medical Society exclusively, there would be much more plausible ground, at least, to maintain that the power was conferred on a body who would have a temptation to abuse it, so as to promote their private interests; but where the power is conferred equally on the University charged with the great interests both of general and professional education, and which can not be perceived to have any such interest, that ground of argument seems to be wholly removed, and it seems difficult to perceive how a power which it is important to the community should be placed somewhere could be placed more safely. The courts are all of the opinion that the law in question is not repugnant to the Article of the Bill of Rights, above cited, and that its validity can not be impeached on the ground that it is a violation of any principle of the constitution."

The licensing of physicians by the Society doubtless aided in restraining a certain number of practitioners from adopting some of the methods of the charlatan; but it did not interfere with the encouragement of the latter by the community. I am indebted to Dr. John Homans for the opportunity of quoting from a letter of Dr. George C. Shattuck to Dr. Homans, written July 26, 1828. It gives evidence of the fondness for quackery in Boston at that time:

"The city has 60,000 (inhabitants?) and seventy-one regularly bred physicians. About one-half, from either youth or age, have not much to do. The irregular physicians are numerous, at the head of which, in popular influence, we may place Thomson, who has formed his botanical society, who have individually learned his system of practice by hot drops and sweating, etc. The disciples of this system, perhaps may embrace one-sixth of the population of Boston. The patent medicines are employed in about, I believe, another sixth of the cases."

In 1831 the Society had reached such a degree of success in carrying out the objects of its incorporation that it included in its ranks "nearly every educated practitioner of medicine or surgery in the State."[11]

The line of distinction was so strongly drawn between its members and irregular practitioners "that the profession is no longer made responsible in the minds of men for the consequences of their ignorance and malpractice, nor its harmony disturbed by their misconduct; and they are much less successful than formerly in diverting the confidence of the community from regular physicians to themselves."[12]

At this time, however, there were certain discordant elements within the Society which threatened its prosperity and usefulness. Some of the younger physicians were dissatisfied with the clause in the Act of 1803, which demanded a period of three years of probation in practice before admission to full membership in the Society. The Legislature was therefore requested to repeal this clause, which it did by a special act in 1831, and approved candidates became at once Fellows of the Society.

A more serious disturbance, which menaced the harmony and influence of the Society at this time, was the appeal to the Legislature from the physicians of Berkshire County, in the western part of the State. They desired to be incorporated as an independent body, nominally on account of their distance from the headquarters of the Society, their limited privileges, and their dissatisfaction with the requirements of the censors. It was supposed that this action was largely planned in the interests of the Berkshire Medical Institution, a medical school incorporated in 1823, but without the authority to confer the degree of Doctor of Medicine.[13] It was situated in Pittsfield, and was practically a department of Williams College (not far distant), which had the power to confer degrees, but no medical faculty or medical school. Williams College sanctioned the degree of the candidates educated at the Berkshire Medical Institution. The conditions of this alliance proved important in the courts[14] when the honorary degree of M.D. from Williams College was offered in evidence as a legal qualification. It was decided it was invalid, since the defendant must have both the education and the degree to be a legally qualified practitioner.

In the year following the incorporation of the Berkshire Institution it had petitioned the Legislature to be granted the same privileges as belonged to the medical graduates of Harvard University, the most important of which was that of being acknowledged and received by the Massachusetts Medical Society without examination as regular practitioners of medicine and surgery.

At that time this petition was successfully opposed, on the ground that the Berkshire Institution had no independent board of overseers like Harvard College, and therefore was not under the same restrictions and oversight. The petition to form an independent society was also successfully opposed; but in 1837, with the approval of the Society, an Act was passed, according to which graduates of the Berkshire Medical Institution were "entitled to all the rights, privileges and immunities granted to the medical graduates of Harvard College."

The rights and privileges of the licentiates of the Massachusetts Medical Society had been somewhat extended by the Anatomical Law of 1834, according

8 Proceedings Massachusetts Medical Society, 1840, p. 68.
9 Loc. cit., 1831, p. 10.
10 Hew itt v. Charier, Jr., 16 Pick., 355.
11 Proceedings Massachusetts Medical Society, 1831, 18.
12 Loc. cit., 1831, 19.
13 Loc. cit., 1836, 25.
14 Wright v. Lanckton, 19 Pick, 291.

to which "the dead bodies of such persons as it may be required to bury at the public expense might be surrendered to any regular physician duly licensed according to the laws of this Commonwealth."

The State had thus definitely committed itself to the regulation of the practice of medicine by the Acts of 1818 and 1819, and had placed the duty of licensing practitioners in the hands of the Massachusetts Medical Society. It conferred but few privileges on the licensed, namely, exemption from militia service and jury duty, the right to obtain and dissect the unclaimed bodies of those to be buried at the public expense, and to collect fees by law.

But unlicensed physicians could take their pay in advance, and were not desirous of the privilege of consulting with the members of the Society. The Thomsonian movement was rapidly spreading throughout the country, appealing to the people by its simplicity and economy, its dogmatic assertions and reports of wonderful cures, its advocacy of vegetable remedies, and its cry of persecution.

The efforts of the Society to include within its ranks all educated practitioners, led in 1836 to the recognition of dentists as practitioners of medicine, since dental surgery was being studied and pursued scientifically by gentlemen of regular medical education.[15]

In the following year a further attempt was made in this direction, by requiring that every licentiate or medical graduate of Harvard or Berkshire entitled to admission to the Society must enter within a year after being so entitled, or be deemed an irregular practitioner. This term was applied to all practitioners in the State who were not Fellows or Licentiates of the Society, or doctors in medicine of Harvard or Berkshire. The above regulation was repealed three years later, since it took away "the freedom originally intended to be allowed to all regular physicians to join the Society or not, as they pleased," and stigmatized "as irregular practitioners gentlemen who have been recognized as competent physicians merely for the exercise of this freedom."[16]

In 1836, the statutes of the Commonwealth were revised, and the report of the commissioners (1835, Part I, 125), includes all the legislation previously enacted, placing the control of the licensing of physicians in the power of the Society.

But the Legislature did not accept the first section, which read as follows:

"No person who has commenced the practice of physic or surgery, since the year one thousand eight hundred and eighteen, or who shall hereafter commence the practice thereof, shall be entitled to maintain any action for the recovery of any debt or fee accruing for his professional services, unless he shall, previously to rendering these services, have been licensed by the officers of the Massachusetts Medical Society, as hereafter provided, or shall have been graduated a doctor in medicine in Harvard University, or in the Berkshire Medical Institution, by the authority of Williams College."

It also negatived a clause making the neglect to record a license a like disqualification to its non-possession.

The Legislature approved this part of the report of the committee with the above exceptions, and it became chapter 22 of the revised statutes, entitled, "Regulations Concerning the Practice of Physic and Surgery."

According to Dr. J. Mason Warren,[17] the first section was omitted in accordance with the wishes of the greater part of the (State Medical) Society . . . as being in its action adverse to their interests. It served merely to excite sympathy, especially for the Thomsonians, and could not prevent them from receiving fees for services rendered.

The Society continued in its work of licensing physicians without apparent disturbance until 1848. At this time its effect in controlling the conditions of medical practice in the State is thus expressed by Dr. A. L. Peirson, of Salem, in behalf of a committee of which he was chairman:[18]

"We have steadily elevated our profession, by improving medical education, encouraging the harmony and honorable intercourse of its members, and have protected from the mischief of quackery, by discouraging every show of it among regular practitioners. This simple and efficient plan of the Society has accomplished all that was ever intended by its organization in 1803. . . . It is to be regretted that, from natural causes, in no way to be attributed to the form of organization, the concentrated action of the Society has not been equally felt in all parts of this extended Commonwealth."

According to Dr. Z. B. Adams,[19] there were at this time 1,237 medical practitioners in Massachusetts, most of whom belonged to the Massachusetts Medical Society.

On the contrary, Dr. J. V. C. Smith presented the minority report of the same committee, in which he states:[20]

"The Society was once eminently useful in protecting the community from the encroachment of ignorant pretenders, . . . and it must be obvious to all that circumstances have greatly changed, our legislative tables have been completely turned, and will probably ever remain so. A license, or medical degree, is no longer requisite for the practice of medicine in Massachusetts, and no laws of the State, or of the Massachusetts Medical Society, are of any avail in guarding the entrance into the profession, or regulating the conduct of its members. . . . Less than one-half of the regular practitioners of medicine now nominally constitute the Society. In Berkshire, there are one hundred; less than twenty belong to the Society. In Hampden, one hundred and thirty (about); and of this number only about twenty or twenty-five are members of the State Society. In some other counties there is doubtless a majority, while in others not one-half of the regular physicians are members. The number of Fellows of the Massachusetts Medical Society is not far from seven hundred, which is not probably one-half of the physicians in the State."

These reports were called forth by a resolution presented by Dr. Childs, of Pittsfield, involving a change in the organization of the Society for the purpose of advancing medical science, promoting harmony and good feeling in the profession, thereby contributing to the best interests of society.

Although the councilors largely favored the views expressed in the majority report, the existence of a considerable degree of dissatisfaction and the necessity of remedying it was apparent in the appointment of a committee to consider the question of altering the by-laws. This committee consisted of Drs. John Ware, A. L. Peirson, W. Lewis, J. Jeffries, J. V. C. Smith, H. H. Childs and John C. Dalton. The report of this committee is especially valuable from the character of the latter, and the recognition of the necessity of the Society to increase and consolidate its strength.

They found[21] that many members had often expressed the opinion that the Society as constituted

15 Proceedings of the Massachusetts Medical Society, 1836, 116.
16 Proceedings of the Massachusetts Medical Society, 1840, 72.
17 Transactions of the Medical Society of the State of New York, 1844, 1845, 1846, vi, app., 40.
18 Proceedings of the Massachusetts Medical Society, 1848, 142.
19 Transactions of the AMERICAN MEDICAL ASSOCIATION, 1848, i, 366.
20 Proceedings of the Massachusetts Medical Society, 1848, 150.
21 Proceedings of the Massachusetts Medical Society, 1848, 155.

did not accomplish all the purposes of which it was capable—and failed to secure the favor of the profession in remote parts of the State. Consequently only a limited number of physicians found it for their interest to become members. They were called upon to obey laws they had no voice in making and to contribute to the expenses of an organization in which they found it difficult to take part. The Society is but little known to those among whom they are thrown, thus has but little influence over them, and is not necessary to their reputable standing among physicians nor to their success with the community that they should be connected with it.

The committee reported various amendments to the by-laws involving favorable action of the Legislature which took place in 1850. By-law V permitted any reputable practitioner of medicine or surgery who had been in practice not less than fifteen years, to be admitted a Fellow, previously to 1852, by the district society where he resides by a vote of two-thirds of the members present at any stated meeting.

The Society was thus endeavoring to increase its influence in the one direction by licensing as many educated and intelligent physicians as possible, and even without examination in certain instances.

This liberality, however, was to be controlled by what many now see to have been an unwise policy, namely, the treatment of the homeopathists.

In 1846[22] an applicant for membership stated that he had great confidence in the efficacy of medicine "especially when prepared and prescribed agreeably to the directions of Hahnemann." The councilors referred the application to the censors, with full powers to settle the matter, and they admitted the applicant to membership.

In the meantime the influence of homeopathy was increasing, and in 1850[23] it was moved "that all homeopathic practitioners are, or should be, denominated irregular practitioners, and, according to the By-Laws of this Society, made and provided, ought to be expelled from membership." This resolve was tabled on motion of Dr. Bigelow.

At the next meeting Drs. Hayward, O. W. Holmes and J. B. S. Jackson were appointed a committee "to devise some course of action, to be pursued by the Society, in regard to all homeopathists." This committee reported as follows:[24]

"1, *Resolved*, That any Fellow of this Society who makes application to resign his Fellowship in consequence of having adopted the principles and practice of homeopathy may be permitted to do so on paying his arrearages; but he shall not be entitled to any of the privileges of Fellowship, nor shall his name be retained in the list of Fellows.

"2, *Resolved*, That a diploma from a homeopathic institution shall not be received as any evidence of a medical education; nor shall the Censors of the Society regard the attendance on the lectures of such institutions, nor the time passed at them, as qualifications which shall entitle candidates to an examination for a license from this Society."

This report was adopted. Three years later the question of homeopathy was again brought before the Society at the annual meeting.[25] The Essex North District Society there presented the following resolution:

"Forasmuch as there is no common ground of support or sympathy between homeopathy and allopathy;

"*Resolved*, That if the homeopaths are allowed to retain their regular standing in the Massachusetts Medical Society, and claim fellowship and counsel with allopaths, we, as consistent and conscientious individuals, request to be honorably discharged from our allegiance and connection with the parent society."

Dr. Spofford presented the following resolution:

"That, while we recognize the right of regular physicians to use medicine in any quantity or doses which they may consider useful to their patients, we consider all use of the name of homeopathy in public papers, on signs or otherwise, as quackish or disreputable, and that all persons who make pretensions to homeopathic practice ought to be excluded from the Society."

These resolutions, together with the whole subject, were referred to the councilors, who appointed the following committee to report upon them: Drs. Bigelow, Metcalf, M. Wyman, Spofford and Alden. Dr. Jacob Bigelow reported in February, 1854, and his report was laid on the table.

In the next year,[26] the censors of the Suffolk District Society rejected a candidate for admission who avowed himself practicing upon the principles styled homeopathy, on the ground that he was not "fitted for the practice of medicine." It was voted (Feb. 7, 1855), on motion of Dr. Bowditch, "that the Councilors approve of the course adopted by the Censors of the Massachusetts Medical Society for Suffolk District."

In the following June this district society called the attention of the general society to defects in the by-laws concerning the expulsion of members, with reference to a remedy; and this question, together with that concerning the admission of members, was referred to a committee for a report. A few days later the latter reported. Their report was referred to the councilors for adoption. They, in turn, referred the report to a committee, which altered the recommendations; these were adopted by the councilors in February, 1856, and by the Society on May 29, 1856.

These alterations made it possible to expel a member for any breach of the by-laws, for which censure, expulsion or deprivation of privilege was a penalty, and for any conduct unbecoming and unworthy an honorable physician and member of the Society, in addition to causes hitherto deemed sufficient. A carefully arranged method of conducting trials for offenses was also provided. The report of the committee of the councilors recommending these alterations stated that they had no definite measures to offer with regard to homeopathy, and submitted the subject to the judgment of the councilors. This part of the report was laid on the table without debate.[27]

June 3, 1856, four days after the adoption of the amended report by the Society, the Homeopathic Medical Society was incorporated by the Legislature. It was authorized to examine all candidates for membership, and, if qualified, give them the approbation of the Society. Its members were declared exempt from militia service.

In the following year, the motion that all candidates for the Fellowship be examined by the censors was referred to a committee, reported upon favorably, and the Legislature passed a special act March 5, 1859, making this method the law.

At this time the revision of the statutes was again under consideration, and the commissioners had made their report to the Legislature, in which the existing laws concerning the regulation of the practice of

[22] Loc. cit., 1846, p. 108.
[23] Proceedings Massachusetts Medical Society, 1850, 32.
[24] Loc. cit., 1850, 51.
[25] Loc. cit., 1853, 102.
[26] Loc. cit., 1855, 7.
[27] Loc. cit., 1856, 35.

medicine were included. This report was referred to a joint committee, which was subdivided into special committees. The general committee referred the chapter concerning the regulation of medical practice to one of these special committees on May 16, 1859. It instructed this committee, "by special order, to inquire into the expediency of omitting all that part of the chapter relating to the Massachusetts Medical Society and to the regulation of the practice of medicine; and on May 21 they reported to the general committee, amendments striking out every section, and every line, and every word in that chapter which gave the Massachusetts Medical Society any power to examine or license physicians or surgeons, or to prescribe a course of study and qualifications for physicians or surgeons."[28]

Four days later, the councilors appointed a committee, consisting of Drs. J. Bigelow, A. A. Gould, J. Jeffries, G. C. Shattuck, H. J. Bigelow, H. H. Childs and J. G. Metcalf, and "instructed them to look after the interests of the Society in the Legislature," and they were "authorized to take such measures to protect their interests as they may deem expedient."[29]

But, in the words of Mr. Benton, "the general committee adopted these proposed amendments, with the addition of a change of title of the Act from 'Regulations concerning the Practice of Physic and Surgery' to 'of the Promotion of Anatomical Science;' and that chapter now stands, with the same title as Chapter 81 of the public statutes. All the amendments were adopted by the Legislature, and were enacted Dec. 28, 1859. . . . . The Legislature then deliberately took out of the law of the Commonwealth every provision for the regulation of the practice of medicine or surgery, or for the examination or qualification of physicians or surgeons."

The committee of the Society appointed to look after its interests in the Legislature recommended, Oct. 5, 1859, that "no person shall hereafter be admitted a member of the Society who professes to cure diseases by spiritualism, homeopathy or Thomsonianism," which was adopted. As evidence of the state of feeling at the time, it may be said that at the meeting at which this resolution was approved, it was voted that the Society disclaim all responsibility for the sentiments contained in the annual address of the day previous. This had been delivered by Oliver Wendell Holmes, and was entitled, "Currents and Counter-Currents of Medical Science."

Thus we see that the Massachusetts Medical Society was organized in 1781 with the express purpose of making a just discrimination between duly educated and properly qualified practitioners and those who ignorantly and wickedly administer medicine. For many years its Fellows acted most judiciously in endeavoring to include within their number every educated and moral practitioner in the State. They accomplished this largely by the force of example, association and united encouragement. The State made them the sole source of licenses to practice. The progress of Thomsonianism left their responsibilities essentially intact. The advent of homeopathy found them weak where they should have been strong, short-sighted where they should have been far-seeing. The leaders were obliged to follow, and the reproval of the censors prevailed against the wisdom of the councilors.

Homeopathic diplomas and homeopathic certificates are now accepted by the Society. Homeopathic physicians have been found fitted to practice by the great public, which decides this question for all. Ten years of increasing intolerance destroyed seventy years of enthusiastic effort, devoted labor, tactful management and wise council in the public interest. The State revoked the control of medical practice, and the people have been the sufferers. The history of Massachusetts in this respect is the history of the country. She was one of the last of the States to lay down the control, and she will be one of the last to resume it.

Thanking you for the patience with which you have listened to an historical narrative which offers but little in the way of moral or example to our own Association, we will proceed to the business of the day.

[28] Argument of J. H. Benton, Jr., before the Committee on Public Health, 1885.

[29] Proceedings Massachusetts Medical Society, 1859. 112.

SOCIETY PROCEEDINGS.

Ohio State Medical Society.

The Forty-ninth Annual Meeting of the Ohio State Medical Society, held at Zanesville, Ohio, May 16, 17 and 18, 1894.

FIRST DAY.

Prayer was offered by the Rev. Charles E. Barnes.

The Address of Welcome was delivered by Dr. E. C. Brush, Chairman of the Committee on Arrangements. The Society was welcomed to Zanesville after a pilgrimage of thirty-nine years.

At the previous meeting held in Zanesville, 1855, Dr. G. S. B. Hempstead, of Portsmouth, presided, and Drs. W. W. Dawson, of Cincinnati, and Charles C. Hildreth, Zanesville, were the Secretaries. Reference was made to Dr. Alfred Ball, of Zanesville, who was the first physician to offer his services to the Governor of Ohio, in 1862, and Dr. Howard Culbertson, who in 1861, was by this Society awarded the prize for the best essay on the use of anesthetics in obstetrics, and also author of the prize essay on excision of the larger joints, presented to the AMERICAN MEDICAL ASSOCIATION in 1876.

The Report of the Committee on Arrangements was then submitted by the Secretary of the Committee, Dr. J. C. Crossland.

Telegrams conveying the congratulations of the Illinois State Medical Society and the Iowa State Medical Society, were received, and the Secretary instructed to return to these bodies, and also to send to the Missouri State Medical Society, the fraternal greetings of the Ohio State Medical Society. These Societies were in session at the same time.

The annual report of the Treasurer and Librarian was read, showing a membership of 665 members, and the Society free from debt. It was accepted.

The report of the Secretary was read and received.

A revised Constitution was submitted by the Special Committee on revision of the Constitution, and was adopted.

The following Committee on Nominations was appointed by the President: Drs. Dudley P. Allen, Geo. A. Collamore, W. J. Conklin, Thad. A. Reamy, and W. J. Scott.

DR. D. S. KELLICOTT, Professor Zoölogy and Entomology, Ohio State University, read the first paper entitled,

THE STATE UNIVERSITY AND MEDICAL EDUCATION.

The author spoke first of the propositions or fundamental principles in accordance with which the University authorities have arranged the course designed especially to prepare students for the successful study of medicine, and then of the course itself.

1. Thorough training is needed for real success in any profession or vocation. This means that the making of a modern master blacksmith requires one to pass the grammar and high schools and four years of as exacting college work as in any course in any college. It has been said, by General Walker, that: "A good technical course produces better educated men in all that term implies than the ordinary college course."

2. The training which is to fit men to practice medicine should be especially thorough and many-sided. It is not only to prepare men to earn a living, but men who, by virtue of their training and opportunities are to be leaders in their respective communities; men who are to have, and may safely have, in charge the lives and health of the people.

3. Therefore, the least that a State university should be permitted to do by way of direct preparation for this great responsibility is a sound preliminary discipline that has reference to the needs, methods and scope of the more strictly university studies of the professional school. This may be accomplished through the regular courses, where pretty free electives are permitted, or by the briefer special course with strict requirements, designed to bring the student out at a definite place, with special fitness and qualities.

4. Medicine has rapidly advanced in recent years as all biological, or more generally, all physical sciences have done. It is less empirical and therefore less independent than ever before; for, as Prof. Huxley puts it: "It is a peculiarity of the physical sciences that they are as independent as they are imperfect; it is only as they advance that the bonds which really unite them all become apparent." The naturalist or biologist has certainly done much to discover and fashion the foundation stones of medicine.

5. It seems, therefore, to follow naturally that the healing art should be treated, from an educational standpoint at least, as a branch of biology, and that the understanding and interest in biology, its methods and its scope, should be broadened and deepened by proper instruction at the proper time, *i. e.*, in the academic course.

6. It appears from a recently issued report from the United States Commissioner of Education, that the relative number of medical students who have acquired academic or scientific degrees is less than formerly. In other words, a larger number, relatively, enter upon medical training direct from the high school, or from the ranks of school teachers or from those who have failed to get on in some other vocation. In the same report it is shown that a majority of medical faculties agree that their students are as well or better prepared now than in former years, so, after all, it may be that the state of the case is no worse, but this is not enough. The difference between "well" and "*pretty* well" is very great. The student's preparation for university studies ought to be "well." It ought to be *very* "well," for until students have special elementary training for the medical course, too much time in that course must necessarily be spent unprofitably on mere elements that should have been well in hand at entrance.

7. The time at present required to earn an academic degree in the American college is regarded by many educators as too long, at least, as compared to the time required in the professional schools. President Hall would "degrade the A.B. degree at least a year in the best colleges;" "Harvard tends toward a three years' course;" while "Columbia allows a coördination of college and professional studies;" so it is a grave question whether it is not better, in the long run, to put more time on the professional training and less on the academic, especially so if the student enters upon his work late in life. To meet this question fairly the State university has instituted a three years' course, the studies of which have especial reference to those that are to follow in the medical college. Moreover, for those who prefer the four years' course in either science or letters, with the degree at the end, pretty free electives are allowed in the fundamentals of a medical course.

8. The Doctor of Medicine has magnificent opportunities for investigation in a range of questions of the highest importance. The annals of science attest their ability. No other profession, speaking generally, in this country, has equal incentives and opportunities; hence the scientific training from the first should be, as far as possible, in the laboratory and with the scalpel. The younger the brain and nerves and muscles when they begin to direct instruments of precision, the greater the skill and conscientiousness in the pursuit of truth in after life; the greater will be the ambition and the broader the foundation therefore to leave one's profession better than he found it.

To enter the course preparatory to the study of medicine at the State university, a student must be 17 years of age and have completed the equivalent of the average high school course in English; it is practically what is now required to enter the engineering and agricultural courses. No language other than English is required.

The course requires three years with an average of seventeen hours per week through the academic year, or about eighteen hundred hours. The time is divided among the several groups of subjects as follows: Foreign language, 432 hours; English, 124; physical science, 318; biological sciences, 656, and the balance upon several subjects designed to make a man a good and strong citizen. In addition, military drill is required one hour per day for the first two years. The completion of this course does not make a finished scholar, but it is claimed that the student concentrates his energy; he has a definite purpose, and there is no subject in the course not germane to his future studies or his future possibilities as a citizen and practitioner. The student who does conscientiously the work of this course is as well or even better prepared to follow and profit by the instructions of specialists than are those who have received a college degree. All the sciences, physical and biological, are taught by the laboratory method. There are two years in physiology and the same in anatomy. One year of three hours a week with text-book, lectures and demonstrations, and one of five hours in the laboratory.

DISCUSSION.

DR. DUDLEY P. ALLEN, Cleveland.—The relative difference between classical training and technical training is discussed in the paper at some length. One difficulty in the United States is that the students do not pass from the preparatory schools into the colleges until 18 or 20 years of age. If they take three or four years special study, they are 26 or 27 years old. If they go through hospitals, that adds another year and a half or two years. If they go to Europe, they come back ready to start at about 30. Men in the United States, beginning the practice after thorough preparation, are considerably more advanced than in Germany or France. A man should be able to begin the work earlier than at present. I presume one difficulty is that a great many colleges are not willing to give a degree to a man who has not studied for years. A good deal can be done in this. Chemistry, materia medica, botany, physics, and also the facts of electricity can be taught in the college or university as well as in the medical college. A four years' college course and four years' medical course could thus be completed in seven years, instead of eight as at the present time.

DR. H. J. HERRICK, Cleveland.—The old idea is that medicine is a learned profession, with theology and law, and it is right it should be so considered. A man hardly knows, before a classical training, what he wants to pursue. Besides books you want manual training. The term should be extended preparatory to studying medicine and perhaps in medicine.

DR. W. J. SCOTT.—The manual training schools are of very great value in training young men how to do and how to think. A boy who is a natural mechanic will make a better surgeon when he studies medicine. This does not argue against a person having a classical education should they desire. With electives in the place of the old regular course in college, the student is sooner prepared to begin the work of life.

The author, in closing the discussion, urged all young men to begin study at an early age, and if they can take a classical course by all means do so, especially where there are electives, as there are now in all leading universities.

THE PREVENTION OF TUBERCULOSIS,

was read by DR. C. O. PROBST, Secretary of the Ohio State Board of Health.

If tuberculosis is a preventable disease surely, considering its prevalence and great fatality no subject of more importance can occupy our attention. Dr. Billings estimates that 125,000 people died of phthisis pulmonalis in the United States in the year 1890. Hirsch says that one-seventh of all deaths among civilized races occur from tuberculosis. The vital statistics of Ohio show the total number of deaths reported from phthisis—laryngeal and pulmonary—during the ten years 1884 to 1893 inclusive, to be 36,455, equal to over 12 per cent. of the deaths reported from all causes. The number reported from tubercular diseases including tubercular peritonitis, tubercular meningitis, hydrocephalous and scrofula, was 42,563, equal to over 14 per cent., or about one-seventh of the deaths from all causes. There were 16,521 deaths from phthisis in males, equal to 10.4 per cent. of the deaths from

all causes in males, and 18,800 deaths from all forms of tuberculosis, or 11.8 per cent. In females there were 19,934 deaths from phthisis, or 13.9 per cent., and 23,762 deaths from tuberculosis in all forms equal to 16.4 per cent. of the deaths from all causes in females. It is usually found that the mortality is greater in males.

In the prevention of tuberculosis we should work in two directions: 1, to prevent the broadcast sowing of the bacillus tuberculosis; and 2, to fortify the soil against its growth.

Let us consider the latter, the predisposing cause, first. How may we control heredity? Whether legislation to prevent the marriage of consumptives, or the children of consumptive parents would be wise or unwise we need not expect any movement in this direction with the present public feeling in the matter. The children of tuberculous parents, however, should be specially guarded against prolonged or close exposure to the exciting cause as in nursing a phthisical person without proper care of the sputa; while by strict and continued attention to all the conditions that favor physical, especially chest development, and the maintenance of a high standard of health their resistance to the tubercle bacilli should be increased. The duty of imparting such instructions belongs to the family physician.

Certain occupations, in which workmen are necessarily and continuously exposed to the inhalations of dusts, especially dusts with sharp cutting points, are attended with a comparatively high mortality from phthisis including phthisis pulmonalis. Against 100 deaths from phthisis in all males between 25 and 65 years, there are 1,576 deaths from this cause in the ten dust-inhaling trades. This greatly increased death rate is doubtless attributable to pulmonary injuries, which favor either the entrance or growth of the bacillus or possibly both; and it is to be noted that while these workers in dust present an unusually high comparative death rate from phthisis, they are still more frequently the victims of other forms of pulmonary disease. Other occupations show a preponderance of death from this disease. This is specially noticeable in occupations carried on in close, badly ventilated rooms, where little physical exercise is required and where constrained position is unfavorable to chest development as among tailors shoemakers, printers and the like. The cause is probably to be found in the constant breathing of pent-up vitiated air, which acts both to concentrate the bacilli cast about the work-shop by those already affected, and to produce a pulmonary condition favorable for their growth. A high death rate is almost invariably found among those constantly exposed to prebreathed air, as in prisons, barracks, nunneries, etc. An opportunity is here presented for the State to very materially lessen the loss of life from phthisis, and at the same time from other causes. Laws should be enacted compelling owners and operators of shops and factories to provide appliances for the removal of all machine dust. Workmen exposed to dust arising from hand operations, which can not be so removed, should be urged or required, if possible, to wear respirators. Greater attention should be given to the ventilation of such places, and minimum requirements as to air space per capita and renewal of air should be provided for by the State and enforced by its agents. The State should also undertake to secure proper ventilation of school houses, for it can not be doubted that the constant breathing of impure air in schoolrooms lays the foundation for much of the disease, of tuberculous as well as other character, occurring later in life. Municipal authorities should provide for the ventilation of cities by the judicious location of public parks, and by regulating the width of the streets and height of buildings; the proper cleaning and sweeping of streets is also a factor in lessening the spread of tuberculosis and other air borne diseases.

Of the other predisposing causes of tuberculosis, damp soil and damp dwellings may be mentioned. Sewerage becomes a factor in reducing the mortality from phthisis, and municipal authorities might also require the proper drainage of the soil upon which dwellings are to be located.

We turn next to the exciting cause, the tubercle bacillus. This may usually be found in all tuberculous discharges, but is chiefly disseminated by dried sputa of persons suffering from phthisis pulmonalis. If every person suffering from this disease could be induced to expectorate into a receptacle containing a disinfectant solution, or into cloths which are at once burned, the ravages of tuberculosis would undoubtedly be very greatly lessened. Not until the masses are made to realize that consumption may be communicated from person to person, may we hope for general observance of such measures. The public press should be enlisted in this educational crusade; and the State Board of Health, by properly prepared circulars, should widely disseminate among the people plain instructions for the prevention of consumption. In theaters, halls and other places of public assemblage, and in railway cars and steamers, it would be possible to require that cuspidors containing a disinfectant should be provided. There is always great probability that a room occupied by a consumptive has become infected, and such a room, when vacated, and the clothing and bedding of the patient, should be disinfected. Unless the relatives or friends are both willing and intelligent, this should be done under the direction of the health authorities, and wherever this seems necessary, the attending physician should report the fact to the board of health. Should tuberculosis be made a notifiable disease? In my judgment it would be unadvisable to attempt to enforce such a rule in Ohio until public opinion has declared in favor of it. The establishment of hospitals for consumptives is to be recommended.

One important channel of infection remains to be considered, viz., the ingestion of tuberculous meat and milk. The prevalence of intestinal tuberculosis in children is believed to be due largely to the ingestion of raw milk from tubercular cows. The bacillus is not destroyed by the gastric juice. As we can hardly expect to stop the eating of rare meat or the drinking of unboiled milk, steps should be taken to eradicate the disease among food-producing animals.

The facts and arguments presented seem to justify the following conclusions:

1. Tuberculosis is invariably due to the action of the bacillus tuberculosis.

2. The healthy human body, under ordinary circumstances, is immune to the disease.

3. Among the predisposing causes productive of tuberculosis are: *a*, heredity; *b*, certain occupations; *c*, breathing impure, especially pre-breathed air; and *d*, dampness of soil and dwellings.

4. The knowledge that tuberculosis is a communicable disease, and instructions for its prevention, should be widely disseminated among the people.

5. State and local authorities should combat in every possible way the predisposing causes of the disease, leaving mainly to attending physicians the proper treatment of patients to prevent infection.

INFECTION IN TUBERCULOSIS—FOOD PRODUCTS.

This paper was read by DR. H. H. SPIERS, Ravenna. No factor is more conducive to the well being of a people than diet of food product. England and India may be cited in illustration. Exchange the food products of these two countries for five generations, and think you their relative strength would remain the same? As with the nation so with the individual, though less marked. Bone, brain and muscle are built on food ample in quality, quantity and variety.

At times a staple production fails or is defective or diseased, through climatic or other causes, and a people dependent on one production must then face starvation or become enervated through diet. As examples may be mentioned the famine in Ireland through failure of the potato crop, local outbreaks of ergotism, etc. Again a product may be defective in that it is improperly cared for. Overripe fruits, partially decayed vegetables, or meats improperly kept must cause sickness to the consumer. In regard to a food product there is only one royal way: *To select only the best.*

There is only one food product with which we are all familiar that is an ideal perfect food: Pure milk. No article has been more used and abused, and it stands to-day eulogized and condemned. Its purity is affected by intrinsic or extrinsic causes. In other words, milk may be changed during secretion or after it is withdrawn. Of the various changes that take place after milking we will not speak, but simply state that they may all be prevented for a longer or shorter period by a proper sterilization.

Of the changes that take place at or during secretion we wish to speak more particularly:

1. It is asserted by high medical authority that tuberculous animals secrete milk containing bacilli, but so far as known to the author no one argues the presence of the bacilli in milk. Seeing is believing.

2. Sterilization of infected food products does not restore a perfect food. No sterilization will change a diseased grain or partially decayed vegetable into perfect food. Were five tons of moldy hay sterilized after the most approved German method, is there a physician who would pay a full market price for the hay? The hay is an imperfect food before a mold fungus starts, and killing the mold fungi does not restore

perfect hay. Milk secreted by a tuberculous animal is a diseased product before the bacilli are found and killing the bacilli by sterilization does not restore a perfect milk. Milk is a secretion; an elaboration of materials from the blood. If the blood be pure the milk is pure, and *vice versa*. The milk of a syphilitic is poor in quality, and should be nursed only in exceptional cases. What shall we say of the milk of an animal suffering from a constitutional disease? Herein, it seems to the writer, lies a secret of the 50 per cent. of mortality under 5 years of age. Poor as are all artificial infant foods, in that they do not contain the elements of nutrition —they are superior to commercial condensed milk, gathered as it is from unknown sources, in that they do not contain elements of disease. If pure milk be the only perfect food, if the infant human race must live on milk, then the way to obtain pure milk is the desideratum of the century. We must have healthy animals, and these can be best obtained by procuring healthy progeny by selection. The animals must conform to hygiene. The man who sells rotten bananas and robs you of your child is no more guilty than the man who improperly cares for the cows that furnish the infant's food. They should alike be held amenable to law. Every precaution should be taken to keep milk pure, and herein lies a field for sterilization.

As to infection in tuberculosis. Imperfect food product lowers the vital resistance, and lowered vital resistance in a tissue means weakness in that tissue. It is the condition of the system that allows the bacilli to enter.

IS CONSUMPTION CURABLE?

This subject was treated by DR. R. E. CHAMBERS, of Chandlersville. The paper was limited to the discussion of tubercular consumption. Many cases reported as cured, in some instances the report being sustained by post-mortem examination, and doubtless correct, may be chargeable to some accidental cause. A case may be here related which came under the observation of the author:

A young lady was annoyed by a cough which became troublesome. There was hectic fever, excessive expectoration, great emaciation, and other physical signs of consumption. The case was abandoned as hopeless. Finally, during a difficult paroxysm of coughing, she felt something hard in the expectoration, which upon examination proved to be a chicken bone which she had drawn into her lungs years before. The healing process commenced and from that date recovery was manifest. Should the investigator for pulmonary facts examine her lungs, they would reveal cicatrices, similar to those which have been found post-mortem in cases reported as recovered from tuberculosis. Diluted alcohol constantly applied by means of six folds of linen over and across the upper lobes of the lungs seems to have power in checking the progress of the deposition and the softening of tubercle in the lungs, and the number of patients who have recovered from incipient consumption under its use and who after many years are still living and in apparent health, speak in strong terms of its value. I have treated some patients with this, in connection with cod liver oil, but without success.

As to heredity, I may mention in illustration a family under my observation: The mother died of the disease, and the father remarried. The children of the second wife were nursed by the children of the first marriage. One by one the children, whose mother had died of consumption, on attaining their twenty to twenty-fifth year, developed the disease and died. The children of the second marriage did not show a trace of pulmonary trouble, and are living to-day. They all grew up at the same house and with the same surroundings. This would surely speak in favor of heredity; on the other hand, it would indicate that the disease is not contagious. The bacilli, which have been claimed to be the cause, belong to the same class of organized life as our forest trees, simply vegetable scavengers. Some consider this as a result and not a cause, and if this be true, we may well question the plausibility of the culture of this decomposed structure, introduced hypodermically into the muscles of the back, destroying an organism incased in lung structure so long that it has become a part of it. It is now claimed by Koch that this culture will not kill the bacilli; it will only make its home uninhabitable. It is to be seriously doubted whether a cure was ever effected; at least, the author has never seen one cured after the disease was fully established.

DISCUSSION OF "CONSUMPTION."

DR. CHAPMAN, of Toledo, five years ago read a paper on what he called tubercular diathesis, and at that time the author of the first paper took the very same grounds he did. There is a way to prevent consumption, which we are learning every day. We should try to prevent an heredity that will develop into a condition susceptible to this disease. The time will probably come when medical men will be called into a household to be constant attendants as long as there is a possibility of tuberculosis remaining in the family. The stooping of the shoulders, turning of the arms at the shoulders, and the sluggishness in walking allow the lung to take such a position that air can not readily pass in and there is caused a necrosis, and as this extends the soil is ready and the germ of tuberculosis will lodge there and be developed. I believe the destruction of the bacilli, with attention to the soil, are going to do all that can be done toward prevention, and I believe the history of the future will not show 14 per cent. of deaths from that horrible disease.

DR. H. H. STRAIT, Cleveland, thought the tubercular diathesis is a catarrhal condition; that is, it is not tuberculosis, and that a great majority of those cases recover. It may be termed a pre-tubercular disease. The irritation of the mucous membranes may here be called an apex catarrh. It is certainly well to make a diagnosis before the patient has tubercle bacilli in his sputum. In the dispensary he had seen only one case recover after the bacilli were found in the sputum. There is a catarrh of the lungs that is non-tubercular, but predisposes to tuberculosis.

DR. H. J. HERRICK, Cleveland, regarded consumption as a disease of impaired nutrition, involving primarily the digestive organs. He did not accept apex catarrh. The trouble originates back in the gastro-intestinal canal, and we should look there for the cause of the difficulty and the cure. The tubercle should be regarded as in a measure a deposit, and it is not difficult to show the connection between impaired nutrition and assimilation and this condition of the lung. Creosote as an antiseptic unquestionably does help.

DR. C. E. BEARDSLEY, Ottawa—If a parent is affected with tuberculosis about the thirtieth year, say, his children will have it about the same time. As to whether the bacilli produces the disease or not, it does seem that a condition must exist before the bacilli can be produced; there must be a diathesis. The disease can be cured up to the time that there is a lesion, but afterward it is impossible.

DR. JOHN MURPHY, Cincinnati—While I agree with the author, I must say he is in the minority of the bacteriologists. Koch has not pretended to say whether the bacillus was the cause or the result, and that question to-day is one which is perplexing and troublesome. One thing is certain, and that is these patients are usually materially benefited by a change to a high, dry atmosphere. All people can not enjoy that, and it would be well to have poor people sent at public expense to one of these climates when afflicted with this disease. We often inherit other diseases from as far back as a great-great-grandfather or great-great-grandmother, and why not phthisis?

DR. PROBST—Answers have been received from 1,149 physicians of the State, a little more than one-sixth. As to the immunibility of the disease, there were 509 answers, giving instances of that kind occurring. In answer to the question as to the disease being communicated by the husband and wife, with no heredity in the wife, 82 cases were given; with the husband and wife, when the facts of heredity were not given, 56, making a total of 148. With the wife and husband, heredity in the husband, 68; wife and husband, heredity not stated, 45, where there was no blood relation to account for heredity. These facts indicate the possibility of the communication of tuberculosis without heredity.

"La Grippe in the Differential Diagnosis between Scarlet Fever, Measles and Rothëln," Dr. James L. Tracy, Toledo, was read by title.

DR. AMELIA J. PRIOR, Cincinnati, read a paper on

SCARLATINA.

The author spoke of the disease from an obstetrical standpoint. Some claim that pregnant women are more liable to the disease, and some that they are less liable. In a case in which a young married woman was exposed to it she did not contract the disease; she continued to the end of pregnancy, and the disease was not developed during the puerperal period.

DR. J. S. HALDEMAN, Zanesville, discussed the subject of

DIPHTHERIA.

The disease starts from, and fixes itself at the point of inoculation, and extends from that location through the whole system. This idea of transmission, however, stands in contra-distinction to the one, that the poison may be taken into the system some other way, either by the lungs,

stomach or intestines without causing any appreciable local destruction of tissue, penetrates the whole organism, and finally advances centripetally to a certain part and then locates itself. Diphtheria may occur sporadically as well as epidemically, and in certain especially favorable localities it may become endemic. It may be considered a miasmatic contagious disease. It may be conveyed through the air alone or by solid matters, to which it may have become attached. The virulence of the contagion depends very much upon the susceptibility of the individual exposed. Children seem to be particularly impressed by it, especially those under 12 years old; those most likely to be seized and to succumb are from 2 to 5 years old, while under five months they seem exempt and impenetrable to its ravages. The sexes are about equally susceptible. Its period of incubation is variously estimated, and depends upon the amount of infectious material, the force of resistance, and on the structure and texture of the tissues which permit the entrance and absorption of the diphtheritic matter. It usually appears about the third day after exposure.

The disease may assume different forms and degrees of virulence, as follows: 1, the catarrhal, which is the mildest; 2, the croupous, in which the fibrinous exudations are manifest; 3, the septic, in which the disintegration of the exudations takes place, followed by processes of decomposition, and gives rise to septicemia; 4, the gangrenous, in which the inflammation may so deepen and intensify that the textures and functions of the parts may entirely lose their vitality, and the most offensive sloughings obtain.

The disease may be arrested in any one of these forms by timely, constant, careful and correct medication and treatment. The cure in the first and second is much more easily accomplished than in the third and fourth, and in the fourth it rarely takes place. An early diagnosis is therefore important. The catarrhal variety, perhaps, is recognized with the greatest difficulty from the fact of its apparent insignificant symptoms, when other affections may be mistaken for it.

FIRST DAY—EVENING SESSION.

(A CRITIQUE)—THE DOCTOR.

DR. SAMUEL HART, Marietta, read this able article. There is in the title, "doctor," no guarantee and no trade-mark. It is appropriated by the mountebank, the brazen pretender and the doctor of corns. Medicine has had an evolution along the centuries, but superstition, priestcraft and astrology still remain in some modified form as an opponent of true medicine of the present day. The drug trust is custodian and practically owner of all the favorite formulæ of the doctor which are to him valuable personal property, and represent some of the best efforts and experience of his life. The trust appreciates a popular prescription, for it continues to return for "refilling;" not only for the first patient, but for many friends and relatives who are "exactly like" No. 1. The unlimited "refilling" of unindorsed prescriptions is directly responsible for a deplorable amount of alcoholic and narcotic habit, which is induced insidiously by chronic medicine tippling. The immense power of the nostrum and the semi-proprietary trade is directly in the possession of the druggist. It is the disheartening opponent of all honest and intelligent practice. The legitimate drug and pharmacy business is essential, helpful and convenient, and if it will take safe and wholesome care of the public interests it will be appreciated as a good trust. But the doctor is on the defensive against the antagonism of numerous creeds, the popular demands for new and startling cures and plans, the omnivorous craving for pills and the "Spring Renovator" and the "Safe Kidney Bug."

The universal, kind, but dangerous advice-giving by the laity is to be deprecated. Last, the public press is averse to regular, conservative, non-advertising medicine. The immense nostrum business; the disgraceful advertisements covering acres of illuminated pages, must command a friendly newspaper interest and efficient lobbying power in legislation to prevent a clean and wholesome State regulation of medical practice.

But the case of the doctor is not grave; the prognosis is entirely hopeful, the prescription infallible, and of his own medicine; it is comprised in a single word, *merit*—professional merit.

THE VALUE OF RECENT THERAPEUTIC LITERATURE,

By DR. W. C. CHAPMAN, Toledo. The literature on therapeutics is very deceptive, and at present we are unable to derive the benefit from it which we should obtain. There is a tendency to take up new remedies rather than to consider thoroughly the old reliable ones, and this is to be deprecated. Many remedies are given, having essentially the same action. We need literature upon which we can rely. It is far better to have one good remedy, thoroughly understood, than any number of unreliable ones. It is better we should use the remedies with which we are familiar, and not experiment upon our patients. We are too prone to give medicine when not needed, and to give more than is necessary. It is our duty to assist nature. Take the cases serratum, and about 73 per cent. will recover if given water alone.

DISCUSSION.

DR. C. E. BEARDSLEY spoke of the influence of medicine, and in illustration mentioned the action of salt solution and atropin upon nerves, as demonstrated by the use of the microscope. If we have potent medicines we can surely find use for them therapeutically. By studying the action of these drugs we are able to produce the effects we desire.

DR. W. J. SCOTT—There is no doubt but medicines have influence when properly used. Sometimes two or three remedies may be used to advantage. This, however, does not argue that we should make unnecessary use of them. The therapeutic literature of to-day undoubtedly contains many new remedies of little or no practical value, and these should not occupy the most valuable part of our literature.

DR. E. G. ALCORN—It will not be twenty-five years until the regular school of medicine will be treating symptoms instead of dosing as they are to-day.

The author in closing the discussion advised more precision. Dosage in sickness is not to be condemned, but it is better to have one good remedy that you thoroughly understand than a million that scatter. We should use the remedies that we know. At present one man will use one thing, another will use another thing, and if you analyze those things there is practically no difference in their action. There is no doubt but bromid is an excellent remedy, and so is bromo- and hydrochloral, but it is doubtful whether even these will do everything they are claimed to do. This is one respect in which our present literature is unreliable.

CERTAIN ENTOZOA OF THE DOG AND THE SHEEP,

by PROF. D. S. KELLICOTT, Columbus. The anatomical laboratories and the clinics of the Veterinary Department of the Ohio State University afford exceptional opportunities to study entozoa of domestic animals. Intelligent prevention on the part of the flockmaster or scientific treatment on the part of the physician depends upon a knowledge of the habits and life histories of the parasites. There are many entozoa that have been long known in one stage, but how acquired by their host, or whether they develop direct or in a second host, are mysteries still. The well-bred and well-fed dog is a noble animal, a useful one, and a faithful friend; but the dog of the other sort is a menace and a nuisance. Just why people in general will meekly allow themselves to be overrun by sparrows, insect plagues and the plague of curs, is inexplicable. Cobbold has given a list of twenty-one species of entozoa infesting the dog, six of which occur in the list infesting man.

The paper records observations on five species affecting the dog and sheep; of these one is a distome, three are tape worms, and the fifth a nematode. The distomum sp. was discovered in the lungs of a dog last March. The three tape worms are Taenia coenurus, T. serrata, and T. cucumerina (elliptical). These are the only species thus far found to infest dogs examined at the University. The T. coenurus is by far the most common, occurring in from 15 to 20 per cent. of all old dogs that have come under observation. It is safe to say that it is harbored by one in every five to ten worthless curs roaming our streets and fields, who in consequence scatter millions of eggs upon soil and in streams for the infection of sheep or other herbivorous animals. The life cycle of the second specie, T. serrata, begins in the rabbit, when it bears the name, cysticercus pisiformis. It is rare with us, but Cobbold states that 5 per cent. of English dogs harbor them. It is plain that rabbit for valuable dogs should be cooked. The T. cucumerina, common in Europe, is rare in Central Ohio. The intermediate host is the dog louse, Trichodectes canis.

Oesophagostoma columbianum, the nematode, in the immature stages produces the "nodular disease of the intestines." The worm evidently has a wider range than was once supposed, and may be doing damage in our section that is attributed to some other species.

DISCUSSION.

DR. KINSMAN—It has been known for a long time that a common cause of death among horses is an aneurismal dilatation of the mesenteric arteries, and manifestations of these

worms have been found post-mortem in Central Ohio. It is found epidemic in sheep. In Iceland, where the people live in close proximity with the animals, the primary stage occurs in the dog and is transmitted to the owner, and we thus have the hydatid disease.

DR. W. J. SCOTT—It has not been mentioned how these parasites are developed. The eggs of the parasite are very numerous, and pass from the bowels of the dog. In his licking to get himself clean and then drinking out of the bucket, he deposits them there, and then the Icelander drinks out of the same bucket, and these are developed. Some years ago a Dr. Cleveland claimed to cure almost any sort of disease with hot water and raw beef. He fed his subjects on raw beef and it was found that a good many of them had tape worms of a peculiar development. These probably came from the cocci contained in the beef.

The eggs are perfectly smooth, five or six times the diameter of the blood corpuscles, and are scattered in bunches all over the thoracic wall. An interesting question is how they got there.

APPENDICITIS—THIRTY CONSECUTIVE OPERATIONS DURING ONE YEAR, WITH ONE DEATH,

by DR. DUDLEY P. ALLEN, Cleveland. The paper contains an account of cases operated upon from April 26, 1893, to May 3, 1894, being thirty in number. Two of them were operated upon by Dr. Wm. H. Nevison, and twenty-eight by the operator. Eighteen were operated in the chronic and twelve in the acute stage. In addition, seven cases were seen in consultation in which delay was recommended, and one case was in a moribund condition when first seen, and died about an hour later. In another case, seen in consultation, a collection of pus was diagnosed in the right lumbar region, and an operation advised, which was made by Dr. Humiston. The case recovered completely. Another case was that of a boy dying with evidences of obstruction of the bowel, the pelvis half way from the pubes to the umbilicus being filled with pus. An operation was strongly urged, although the patient was already in collapse and died some three or four hours later. At the autopsy it was found that the origin of the collection of pus was an ulcerated appendix. The one case which died was that of a young man, seen in his first attack. Though the attack was somewhat severe, he recovered and was seemingly well, but was seen five or six weeks later in a second attack. This was not very violent, but he was positively advised to have an operation performed after the severity of the symptoms had abated. He was again seen in a third attack and similarly advised, but no operation was permitted until the seventh attack, which was six months after the original one. He was then in a decidedly serious condition; the adhesions were found to be very great, and the operation was one of extreme difficulty, but seemingly successful. On the sixth day swelling of the left parotid gland became apparent, and two days later the parotid was thoroughly opened, before any abscess had formed, there being simply multiple minute points of breaking down tissue. The patient died on the fifteenth day. Two other cases in which delay was recommended came to operation in subsequent attacks, and both recovered. During the year there were seen forty cases of appendicitis, thiry having been operated upon, and all but one have recovered. Besides these, one was dying when seen.

In one a large abscess was found and opened in a patient already in collapse, and it was not until the autopsy that its origin was found to have been in an ulcerated appendix. Three cases in which delay was advised were among those operated later. The remaining four cases are still alive, two of the four having suffered from repeated attacks, while two have been lost sight of.

In the acute cases and in those in which pus has been present, the abdominal cavity was packed with iodoform gauze, and the wound left open. When no pus was found, and when possible, the appendix was amputated, invaginated and closed by two or three rows of catgut, and the abdominal wound closed without drainage. In cases with considerable pus present, and extensive ulcerations, too great effort has not been made to remove the appendix. In some cases the appendix was evidently entirely destroyed by sloughing. In others to have found it, would have necessitated opening widely the peritoneal cavity, in which cases it is not wise to pursue the effort too far.

The following conclusions seem justified:

1. Though many cases of appendicitis may recover without surgical aid, it is by no means an easy matter to distinguish these from those which are more serious, and it is of vital importance if surgical counsel is to be summoned, that it should be called before the disease is so far advanced as to render the operation hopeless.

2. Operations for appendicitis, though often easy, are at times extremely difficult, requiring the skill necessary for the most critical laparotomy, and it would be better in many cases to trust to nature than a poor operator.

3. Careful examination will disclose the fact that many patients, suffering from what is supposed to be a primary attack of appendicitis, have had previous difficulty in this region, and an examination of the appendices removed will demonstrate positively the existence of long standing inflammation.

4. Operations in the acute stage of primary attack are beset with danger, and it is important they should be undertaken before the patient is in collapse, before peritonitis has become general and before the patient is thoroughly septic.

Operations upon recurrent cases, though sometimes of extreme difficulty, are in most instances, if in the hands of a skilful operator, far less dangerous than the disease itself, and in such cases the question of operation should receive careful consideration.

DISCUSSION.

DR. HERRICK.—The question is whether operations for appendicitis are justifiable in a great many cases, and what class to operate upon. Of about fifty cases, I have only known two which were operated upon, terminating fatally. In constantly and rapidly recurring cases of appendicitis, our duty is to operate, and to select the time between paroxysms for operation. However, for the last eighteen months there seems to have been too much of a craze for operating.

DR. KINSMAN—In these cases, as soon as there is distension of the abdomen, there is complete paralysis of the bowel, and then, according to Richardson, we should not operate. In several cases I have seen the McBurney point was clear enough, but there was no tumor found. A positive symptom of appendicitis, which can be relied upon, seems to be lacking.

DR. DANDRIDGE—No doubt we should not prolong too long the search for the appendix. Some cases are masked, and very insidious. A case I operated upon yesterday commenced last Wednesday. The case was seen first on Saturday, and there was a well-defined resistance in the right iliac fossa, with marked pain and a slight fever, ranging from 100½ to 102 degrees. The boy did not feel very sick, nor did he present the appearance of being sick. The fever continued, the local condition did not subside, and an operation was undertaken. The appendix had sloughed, the accretion was free, and the terminal portion was gangrenous. There is no doubt whatever but the patient in this case was much safer with the operation than without it, although the symptoms were very slight. The pathologic conditions found indicated that it had existed some time. The surgeons are not so anxious to operate in these cases as they are sometimes charged. It seems that hernia frequently follows this operation.

Every case should not be operated upon, but frequently the surgeon is called too late to operate successfully. It is extremely difficult to determine when to operate. Dr. Richardson recently said to me: "The more I see of appendicitis, the less I know about it." As to diagnosis, I have never yet made an error, but every time I have operated for appendicitis I have found the condition operated for. Definite rules upon which to base a diagnosis can not be given. The condition, however, will usually be found in young people having pain in the region of the appendix.

DR. C. R. HOLMES, Cincinnati, then requested that his paper be read by title: "Diseases of the Accessory Nasal Cavities and Their Influence in Producing Ocular Inflammation; Modern Surgical Treatment and Report of Cases."

(To be continued.)

A Wide Liberality.—The will of the late Jesse Seligman, of New York City, provides for the bestowal of donations to not less than forty-seven public institutions, or for public benefactions. The gifts vary from one hundred to seven thousand dollars respectively. The personal estate left by Mr. Seligman is worth over one million of dollars, of which about one-tenth part is donated to charitable objects. He has been styled "a most catholic giver."

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All members of the Association should send their Annual Dues to the Treasurer, RICHARD J. DUNGLISON, M.D., Lock Box 1274, Philadelphia, Pa.

SATURDAY, JUNE 9, 1894.

THE LICENSED PHYSICIAN IN MASSACHUSETTS.

In his address at the ninth annual meeting of the Association of American Physicians, held in Washington last week, DR. REGINALD H. FITZ, President of the Association, traced the rise and fall of the licensed physician in Massachutetts from 1781, the date of the incorporation of the Massachusetts Medical Society, to 1860, when the Legislature had deprived the Society of any power to regulate the practice of medicine by the examination and licensing of physicians and surgeons or by the enforcement of a prescribed course of study and qualifications.

With abundant citations from historical authorities, the learned speaker sketched the growth of the Society and its increasing usefulness and influence, which, in 1818–19 led the State to definitely assume the regulation of the practice of medicine and to place the duty of licensing practitioners in the hands of the Society. In 1831 the Society had reached such a degree of success in carrying out its objects that it included in its membership "nearly every educated practitioner of medicine or surgery in the State;" and for the next ten or a dozen years its policy seems to have been extremely conservative, even going to the extent of discouraging the granting of further power and authority by the Legislature on the ground that it would be adverse to the best interests of the Society and would serve merely to excite sympathy for quacks and irregulars, and especially for the "Thomsonians," who were rapidly increasing in numbers throughout the country—the system "appealing to the people by its simplicity and economy, its dogmatic assertions and reports of wonderful cures, its advocacy of vegetable remedies and its cry of persecution."

This conciliatory policy seems to have been extended to the "homeopaths," and in 1846 an applicant, who stated that he had great confidence in the efficacy of medicine, "especially when prepared and prescribed agreeably to the directions of HAHNEMANN," was admitted to membership. The Society continued its work without apparent disturbance until 1848, when it is recorded in the Proceedings of that year that: "We have steadily elevated our profession, by improving medical education, encouraging the harmony and honorable intercourse of its members, and have protected from the mischief of quackery by discouraging every show of it among regular practitioners. This simple and efficient plan of the Society has accomplished all that was ever intended by its organization."

Two years later the growth of homeopathy had become so great that there was a demand by many members for a change from what they denominated the rule of King Log to that of King Stork, and, although a resolution offered at the annual meeting in 1850, to declare all homeopathic practitioners irregulars and to expel them from membership in the Society, was tabled on motion of DR. BIGELOW, the agitation was still continued, and at the next meeting it was ordered that the diploma of a homeopathic institution should not be accepted as evidence of a medical education, nor as a qualification entitling its owner to "an examination for a license from this Society." Meanwhile, the pressure from the district societies for further aggressive action became more and more pronounced, and, in 1856, at the demand of the Suffolk District Society, the by-laws were so amended as to make expulsion from membership the penalty for offenses hitherto punishable by censure or deprivation of privilege; and a hostile public sentiment was aroused at what was stigmatized as the growing intolerance of the Society. Almost simultaneously with these amendments to the by-laws, the Massachusetts Homeopathic Medical Society was incorporated, and thenceforth the breach between the public and the Society widened year by year.

In 1859 the Massachusetts statutes were undergoing revision, and a committee of the Legislature was instructed "by special order, to inquire into the expediency of omitting all that part of the chapter (of the statutes) relating to the Massachusetts Medical Society and to the regulation of the practice of medicine." The committee reported in favor of such omission, and on Dec. 28, 1859, there ceased to be any regulation of medical practice in the State.

DR. FITZ is evidently not sanguine as to the feasibility of State control of this subject. He closes his address with these words: "Ten years of increasing intolerance destroyed seventy years of enthusiastic effort, devoted labor, tactful management and wise council in the public interest. The State revoked the control of medical practice and the people have been

the sufferers. The history of Massachusetts in this respect is the history of the country. She was one of the last of the States to lay down the control and she will be one of the last to resume it."

As a commentary upon this concluding sentence it should be noted that the Massachusetts Senate has already passed a bill for the control of medical practice in the Commonwealth, substantially the same as that in force in Illinois and many other States. Probably in order to avoid any future charge of "intolerance," section 11 of the bill exempts from its operation "clairvoyants, persons practicing hypnotism, magnetic healing, mind cure, massage methods, Christian science, cosmopathic or any other method of healing," provided they refrain from appending to their names "the letters M.D., or using the title doctor, meaning thereby a doctor of medicine." Surely such a concession should allay opposition, even in Massachusetts.

RIGHT OF RECOVERY FOR UNLICENSED PRACTICE IN EMERGENCY CASES.

The Appellate Court of Indiana considers, in the case of Board of Commissioners of Adams County v. COLE, decided March 13, 1894, the right of a physician to recover for services rendered in a case of emergency without his having the required license to practice medicine. The question arose over a physician located not far from the border line in Ohio, being called to attend a man in Indiana suffering from a broken leg. It was shown that there was a pressing emergency, and an urgent necessity to amputate the leg as soon as it could be done, in order to save the patient's life, so that there was no time to be spent in first securing an Indiana license on the physician's part. The statute of the latter State, however, requires every physician or surgeon desiring to practice his profession there to procure a license therefor, and enacts that no cause of action shall lie in favor of any person for services as a physician, surgeon or obstetrician who had not, prior to the rendition of such services procured the prescribed license. The practice of medicine and surgery consists, the Court holds, in the application of science, skill, and experience to the cure or alleviation of the ailments of the human body; and whether a physician exercises his skill upon one patient, or upon a greater number, he is, in each case, engaged in the practice of his profession. According, then to the letter of the law, strictly and literally interpreted, it says that nothing could be recovered in a case like this. But, it is further declared, courts are not always required to give full force to the exact letter of the law, but are oftentimes permitted—nay, more, required—to relax somewhat the rigor of an exact compliance. And this is one of the cases where the exception is to be made. To hold that the physician's conduct, thus far, was within the inhibition of the statute, would be the extreme of inhumanity. This does not, of course, justify him, the Court adds, in continuing his attendance upon his patient, day after day, without procuring a license for the practice of his profession there, though it does show that he is entitled to recover something for his services first rendered. Among the instructions given to the jury in this case was one to the effect that if a physician competent and qualified, from another State or county, were called on a professional visit for consultation, or the call was made because of some special skill or ability of the physician in a particular branch of his profession, or there was an existing emergency for the attendance of such physician, in order to save life, and under such circumstances the physician acted without procuring a license, such physician would be entitled to recover for his services thus rendered, notwithstanding he had no license, and the law would aid him in making such collection. This charge the Court holds was erroneous. The right to recover is not to be extended beyond the necessity of the actual emergency. It is better that competent physicians should suffer some inconvenience than that the door should be opened for the incompetent. If a physician may safely practice his profession without a license because some one—wise or unwise—judges him to have special qualifications for the treatment of certain ailments, and "the call is made because of some special skill or ability of the physician in a particular branch of his profession," then there will remain few practitioners in all the land who may not utterly disregard the provisions of the law. All that would be necessary for him to show would be that he was called to visit his patient "because of some special skill or ability" in the treatment of some given infirmity; and this he could always do, for the very reason for his call was that his patient believed him to be possessed of such special skill and ability.

CHRISTIAN SCIENTISTS MUST GET CERTIFICATES.

Judged according to both the law and the Gospel, are the so-called "Christian scientists" in the case of State v. BUSWELL, decided by the Supreme Court of Nebraska April 17, 1894; and the judgment rendered is against them. The defendant named in this case was indicted for practicing medicine, as a Christian scientist, without a certificate from the State Board of Health, as required by the State statutes. Strangely enough, the jury rendered a verdict of "not guilty," to which the State excepted, and on its exceptions took an appeal. The Supreme Court sustains the exceptions, but says that in cases presented as this one was, on the exceptions of the State, no judgment can be rendered, and therefore none is attempted. It consequently is here content to pass upon the questions of law raised, for the future

guidance of trial courts. The Act to establish a State Board of Health; to regulate the practice of medicine, in Nebraska, etc., it holds, is as much directed against any unauthorized person who shall operate on, profess to heal, prescribe for, or otherwise treat any physical or mental ailment of another, as against one who practices "medicine, surgery and obstetrics," as those terms are usually and generally understood. The object of the statute establishing a State Board of Health, etc., is to prevent imposition upon the afflicted by ignorant and unqualified pretenders to healing power; and any person not within the exceptions prescribed in the Act, (as persons rendering gratuitous services in cases of emergency, and commissioned surgeons of the United States Army or Navy, and nurses in their legitimate occupations,) and not having complied with its requirements as to a certificate, who shall, under any pretense, operate on, profess to heal, or prescribe for, or otherwise treat any physical or mental ailment of another, thereby renders himself liable to its penalties. The defendant relied upon the teachings of the Bible for his authority as a Christian scientist. Lest his contention be misunderstood or imperfectly stated, the language contained in the brief filed on his behalf is freely used. This and the summary of the evidence given by him and his witnesses furnish some curious reading, though a reproduction of it would not particularly instruct readers of the JOURNAL. The Court also, as before intimated, goes to the Bible for light on the case. It quotes from the eighth chapter of the Acts of the Apostles where SIMON, the sorcerer, figures in the narrative, and he is condemned for seeking to purchase the gift of God with money so as to make gain thereof. The healing of NAAMAN, of leprosy, by compliance with a very simple hydropathic course, and the rebuke of the prophet's servant for taking the reward therefor which his master refused, as well as God's recorded disapproval of BALAAM's partly executed project of profiting by the use of the Divine power with which he was endowed, are cited to show that the exercise of the art of healing for compensation, whether exacted as a fee or expected as a gratuity, can not be classed as an act of worship. Neither is it a performance of a religious duty, as was argued. The conservatism resulting from the study of standard authors might be somewhat depended on to minimize the evils attendant upon unlicensed practitioners' attempts to follow regular and approved methods, although, as against even these, the law should be enforced. Still more stringently, says the Court, should its provisions be rendered effective against pretensions based upon ignorance, on the one hand, and credulity on the other.

Blank Applications for membership in the ASSOCIATION, at the JOURNAL office.

MISREPRESENTATIONS BY MEDICAL EXAMINERS.

The Supreme Court of Arkansas re-states, in the case of the Providence Savings Life Assurance Co. v. REUTLINGER, decided March 10, 1894, the law, as determined by many adjudications, with regard to the effect of misrepresentations made by medical examiners, especially of insurance companies. It says that when a medical examiner, authorized by an insurance company to fill up blanks for answers to questions to be propounded to applicants for insurance in a medical examination, or to fill them up is within the apparent scope of his authority, does so by writing false answers, and thereafter procures the signature of the applicant thereto, after he had given correct answers to the questions, and the Company afterwards receives the premiums, and issues a policy, the Company will, upon the death of the insured, be estopped from insisting on the falsity of the answers, although warranted to be true.

This rule is, however, subject to the obvious limitation that if the applicant, knowing the presence of the untrue answer by having read it or otherwise, afterward certifies to its truth, the insurer may set up the untruth. And if, after the delivery of the policy, he discovers that a fraud has been perpetrated on him and the company by means of the false answers, it would be his duty to make the fact known to the company. He could not hold the policy without approving the action of the agent, and thus becoming a participant in the fraud committed. The consequences of that approval can not after his death be avoided.

It is also held, in this case, that where questions propounded to an applicant for insurance upon his life as to his physical condition are in such terms as include the most trivial ailments or injuries, they will be interpreted as referring only to such illness or injuries as affect the risk to be assumed, unless they are in words which exclude such interpretation. The presumption is that trivial ailments or injuries are not within the contemplation of the parties, and that the questions, in the absence of words directing attention to them, are not asked with the view or purpose of ascertaining the existence of the same. The answers of the applicant are interpreted in the same manner as the questions eliciting them; that is to say, as responsive to the questions in the sense in which they are asked.

INTOXICATION OF PHYSICIAN MAY BE SHOWN.

In an action brought to recover damages for the malpractice of a physician or surgeon, the Appellate Court of Indiana holds, in the case of MERRILL v. PEPPERDINE, decided March 30, 1894, the plaintiff may show, by himself and other witnesses, the condition of the physician or surgeon, as to being intoxicated, and as to his appearance, at the time the services were being performed.

CORRESPONDENCE.

Editorial Correspondence.

DENVER, COL., May 30, 1894.

The ASSOCIATION Train arrived at Colorado Springs at 9 A.M., where we had an excellent breakfast at the "Antlers." A trip to Pike's Peak, which had been contemplated, was postponed on account of the rain which fell in torrents, loosening boulders, which rolled down the mountain and smashed everything in their path so that ascent was impossible; but notwithstanding the rain most of the party went to visit the Garden of the Gods. This singular spot is a large circular area of about 80 acres surrounded by rocks rising from 300 to 500 feet perpendicularly, the crests of which seemed to assume fanciful shapes, and which when viewed in profile might by some stretch of the imagination be said to resemble the animals and faces as announced by our coachman. We rejoined the train fully repaid for our toilsome trip, but more than one of the party expressed the wish that Jupiter Pluvius were not in the ascendency. At Colorado Springs we again met Dr. Maclean's party and congratulations were exchanged at the "Antlers." Dr. Solly, of Colorado Springs, showed our party many attentions. We then left for Denver where we arrived at 5 P.M. amidst a downpour of rain. We were met at the depot by a delegation of Denver physicians among whom were, Dr. Chas. Dennison, Capt. Le Garde, U.S. Army, Clayton Parkhill, Dr. Hopkins, J. A. Rogers, W. J. Rothwell, E. J. Rothwell, W. S. Bagot, J. N. Hall, W. A. Jayne. Many of our party went to Brown's Hotel for dinner, some were entertained by Dr. Chas. Dennison, others at the various clubs. At the Denver club dinner we noticed the following present:

Capt. LeGarde, Denver; Drs. Graham, Chicago; Mulheron, Detroit; Graham, of Denver; Montgomery, of Philadelphia; Donald Maclean, Detroit; Rogers, Denver; Lapthorn Smith, Montreal; E. F. Ingals, Chicago; E. J. Senn, Chicago; Jayne, Detroit; Talbot, Chicago; Frank Woodbury, Philadelphia; Imry, Detroit; Stearns, Indiana; Rano, Connecticut.

Dr. Maclean's party were also in Denver at the same time, and joined our party in the festivities of the evening.

We left Denver at 2:30 A.M.; Dr. Dennison and Dr. Graham of Denver joined our train here.

COLORADO SPRINGS, May 31.

We arrived here for an early breakfast at the "Antlers," and found that the rain had caused landslides at the Manitou tunnel, and a washout near "Divide," so that our train must remain at this point twenty-four hours at least. If the rain continues, the probability is that we will be obliged to remain thirty-six hours longer. The only other road is in an even worse condition by reason of the loss of bridges, so we can not get away and must make the best of it. The party are taking the matter philosophically, but want to see the Peak, which is hidden in the clouds, and the pouring rain does not show at this hour any signs of abatement.

The following is a list of those joining the train at Burrton, Kan.:

C. S. Bond and wife, Richmond, Ind.; Miss Lizzie Hill, Richmond, Ind.; E. Griswold and wife, Sharon, Pa.; J. E. Woodbridge and wife, Youngstown, Ohio; A. C. Brant and sister, Canton, Ohio; A. B. Walker, Canton, Ohio; G. H. Price, Nashville, Tenn.; A. D. Price, Harrisburg, Ky.; Ambrose Morrison, Nashville, Tenn.; G. D. Butler and wife, Pulaski, Tenn.; H. C. Davis, Harrisburg; G. E. Davis, Salvisa, Ky.; C. T. Benner, Tiffin, Ohio; Percy Warner and wife, Nashville, Tenn.; J. A. Nicholls and wife, Pulaski, Tenn.; C. A. Abernathy, Pulaski, Tenn.; Julia Flournoy, Pulaski, Tenn.; A. R. Baker, Cleveland, Ohio; J. T. Reddick, Paducah, Tenn.; A. G. Willey, Spencer, Ohio; Edwin Walker and wife, Evansville, Ind.; A. D. Hahn and wife, Richmond, Ind.; D. C. Wilson and wife and daughter, Ironton, Ohio; O. B. Dunn, Ironton; S. C. Martin and wife, Anna, Ill; S. J. Young and wife, Terre Haute, Ind.; C. Hicks and daughter, Caborn's, Ind.; S. H. Pearse and wife, Mt. Vernon, Ind.; Miss Alice G. Howard, Mt. Vernon, Ind.; Miss Anna Schrader, Mt. Vernon, Ind.; X. C. Scott and wife, X. C. Scott, Jr., Cleveland, Ohio; J. T. Hibberd and wife, Richmond, Ind.; Miss L. M. Hibberd, Richmond, Ind.; Miss E. M. Comstock, Richmond, Ind.; J. E. King and wife, Centreville, Ind.; J. A. Foote, Terre Haute, Ind.; C. T. Brown and wife, Pendleton, Ind.; J. W. Cook, Pendleton, Ind.

Registration in South Carolina.

AIKEN, S. C., June 4, 1894.

To the Editor:—The Legislature of the State of South Carolina, in session December, 1893, passed a medical law which went into effect Jan. 4, 1894. The tenor of it is:

That any one who has not registered in this State to practice medicine and surgery before Jan. 4, 1894, will have to appear before the Board for examination, after they have presented their diploma to the Board. The Board meets the fourth Tuesday in April of each year, and whenever they deem necessary to have an extra meeting. This year we meet again Tuesday, October 9, and all examinations before the Board are written, two hours being allowed upon each branch. Any one who is practicing in this State after the October meeting will be prosecuted. The fine is $300, and imprisonment for six months.

Any one desiring further information can get it by applying to the undersigned. C. F. MCGAHAN, M.D.

SOCIETY NEWS.

Chemung County Medical Society.—The annual meeting of the Chemung County (N. Y.) Medical Society was held May 23. The following officers were elected: President, W. E. Colgrove; Vice-President, Jonas Jacobs; Secretary, N. H. Noble; Treasurer, C. T. Squire.

Officers Chicago Medico-Legal Society.—The annual meeting of the Medico-Legal Society was held at the Grand Pacific June 2. The following officers were elected for the ensuing year: President, Dr. James Burry; First Vice-President, Dr. C. D. Wescott; Second Vice-President, Dr. Sanger Brown; Secretary, Dr. Archibald Church; Treasurer, Dr. Joseph Matteson.

Indiana State Medical Society.—At the recent meeting of the Indiana State Medical Society, May 17 and 18, at Indianapolis, the following officers were elected for the ensuing year: President, E. S. Elder, Indianapolis; Vice-President, C. S. Bond, Richmond; Secretary, F. C. Woodburn, Indianapolis; Assistant Secretary, K. K. Wheelock, Fort Wayne; Treasurer, J. O. Stillson, Indianapolis.

F. C. WOODBURN,
Secretary Ind. State Medical Society.

American Physicians and Surgeons.—The Triennial Congress of American Physicians and Surgeons closed its third meeting in Washington, D. C., June 1. The meeting was opened on Tuesday afternoon, May 29, with an address by Dr. Landon Carter Gray and the program embraced papers on "Morphology as a Factor in the Study of Disease;" "Sewer Gas;" "Distribution and Control of Leprosy in the United States;" "Nephritis in its Surgical Aspects;" "The Influence of Animal Experimentation on Medical Science" (by Dr. Alfred L. Loomis, President of the Congress); "The Surgery of the Accessories of the Nose;" "The Influence of Infectious Processes on the Nervous System." Delegates were present from the American Surgical Association, American Climatological Association, Association of American Physicians, American Association of Genito-Urinary Surgeons, American Orthopedic Association, American Physiological Society, Association of American Anatomists, American Pediatric Society, American Ophthalmological Society, American Otological Society, American Neurological Association, American Gynecological Society, American Dermatological Association, and the American Laryngological Association.

Washington State Medical Society.—The fifth annual meeting of the Washington State Medical Society was held at Spo-

kane, Washington, May 3 and 4. The attendance was rather small, especially of the members from the western part of the State. The papers presented, were, however, of a higher order than those of any previous meeting.

The following was the program carried out: Opening prayer, by Bishop L. H. Wells, of the Episcopal Church; Address of Welcome, by Mayor E. L. Powell; Report of Chairman of Committee of Arrangements, by Dr. N. Fred Essig, of Spokane; President's Address, by J. W. Waughop, of Fort Steilacoom; annual reports of Secretary, Treasurer, and Publication Committee; report of Committee on Credentials, by G. A. Weed, of Seattle; report of Committee on Necrology, by N. J. Redpath, of Fort Steilacoom; reports of Special Committees; reports of Standing Committees.

The following papers were presented: The Drunkard and His Cures, by W. W. Potter, of Spokane; Auto-Infection, by J. W. Hickman, of Tacoma; Cerebral Palsy of Childhood following Diphtheria, by C. W. Sharples, of Seattle; Cholecystotomy, with Reports of Three Cases, by J. B. Eagleson, of Seattle; Complications and Accidents in Abdominal Surgery, with Reports of Cases, by J. J. McKone, of Tacoma; Surgical Cases of Interest Occurring in Seattle, by C. W. Sharples of Seattle; Surgical Infections, by Edward Bowes, of Spokane; Physiology in the Public Schools, by G. S. Armstrong, of Olympia; Mental Development, by J. M. Semple, of Medical Lake; Concealed Insanity, by W. H. Anderson, of Medical Lake; Some Cases of Optic Nerve Trouble, by R. L. Thomson, of Spokane; Ruptured Perineum, by C. G. Brown, of Spokane; Dry Dressings to Promote Primary Union, by G. T. Doolittle, Spokane; Treatment of Urethritis, by D. G. Russel, of Spokane; Salpingitis, by T. L. Catterson, of Spokane; Cause and Prevention of Peritonitis in Women, by C. P. Thomas, of Everett; Hydatid Cyst of Liver, by J. T. Coleman, of Tacoma; Cleanliness in Surgery, by D. Mason, of Spokane; Trachelorrhaphy Forceps, by J. M. Crump, of South Prairie; Treatment of Foreign Bodies in the Brain, by H. B. Luhn, of Spokane.

The following officers were elected for the coming year: President, Dr. D. Mason, of Spokane; First Vice-President, Dr. J. W. Hickman, of Tacoma; Second Vice-President, Dr. H. R. Keylor, of Walla Walla; Secretary, Dr. R. L. Thomson, of Spokane; Treasurer, Dr. J. B. Eagleson, of Seattle.

Seattle was chosen as the next place of meeting.

PUBLIC HEALTH.

House-to-House Inspection.—The house-to-house inspection, which accomplished so much good last summer in improving the public health of Philadelphia, has been ordered repeated this summer by the authorities of that city. A similar work is being prosecuted, under the auspices of the State Board of Health, in several hundred cities and towns of Illinois, as one of the important features of a sanitary survey of the State.

Another Epileptic Colony.—At the recent meeting of the Illinois State Medical Society a resolution was introduced and adopted, indorsing a proposition for an epileptic colony for the State on the Bielefeld plan. The resolution was referred to the Committee on Legislative Action, with instructions to bring the matter before the next General Assembly and to use all proper means to have such a colony established.

School Vaccination Law Upheld.—In the proceedings growing out of the suit to prevent the New Britain (Conn.) school board from enforcing its school vaccination order, the Superior Court at Hartford has decided that the law giving the school board authority to order all school children to be vaccinated and to exclude from the schools all not vaccinated is constitutional and that orders based thereon must be obeyed.

Vaccination Order Rescinded.—Owing to a conflict of authority between the City Board of Health and the Board of Education in the City of Philadelphia, the Board has withdrawn its order excluding non-vaccinated children from the public schools. The reason given is that as no epidemic threatens at present the Board was "not willing to resort to extreme measures." One way to prevent epidemic smallpox is to compel the vaccinal protection of every scholar and to rigidly exclude every child not so protected at all times and under all circumstances.

Floods and the Public Health.—Dr. Benjamin Lee, Secretary of the Pennsylvania State Board of Health, has instructed the medical inspectors of the Board to exercise increased vigilance in the districts of the State affected by the recent floods, "as such conditions will be left as will, undoubtedly, prove extremely prejudicial to the public health." Inspectors are advised, however, to make no promises of material aid, either in the shape of money or of disinfectants, "as the appropriation for the State Board of Health does not contemplate such use of its very limited funds."

Health of New York City.—Reports of the Bureau of Vital Statistics continue to show an excellent state of the public health in New York City. The annual death rate for the four weeks ended May 26 was a fraction less than 21 per thousand, as against 25.48 per thousand for the corresponding period of 1893. The mortality from pneumonia, although diminishing, is still greater than that from consumption. Diphtheria continues to be the most fatal of the zymotic diseases; a considerable number of new cases of smallpox are still reported every week; there is but little typhoid fever in the city.

Michigan Conference of Health Officers.—The second annual conference of Health Officers in Michigan will be held at Ann Arbor, June 14 and 15. The first day's session will be devoted to the subject of tuberculosis. There will be papers on the "Spread of Tuberculosis," by Prof. F. G. Novy, M.D., of the State University, and on the "Restriction and Prevention of Tuberculosis," by Dr. Henry B. Baker, Secretary of the State Board of Health, with demonstrations of the tubercle bacilli, methods of staining, growing and inoculating with the bacilli and postmortems of animals that have been inoculated with the bacilli. Other subjects to be presented and discussed are the "Causation, Restriction and Prevention of Typhoid Fever," the "Relations of Vaccinia, Variola and Varioloid," and a demonstration of the methods employed in the State Laboratory of Hygiene for the examination of drinking water will be given.

Cemeteries from the Sanitary View-Point.—Investigations of the Paris cemeteries strengthen the arguments against intramural interments and in favor of cremation for the disposal of the dead in the interests of the quick. Although M. Rochard asserts that the belief that bad smells emanate from cemeteries is unfounded and that there is an absence of noxious gases in well-kept cemeteries, there are other evils more insidious and more dangerous. Water filtered through the soil of cemeteries becomes polluted, and wells more than 100 meters from the graveyards of Mont Parnasse and Père Lachaise were found to be contaminated from this source. With regard to the theory of germs being stored up in graveyards and later spread about, resulting in epidemics, M. Rochard believes that it is not impossible that when graves are dug microbes rise to the surface and mix with the surrounding atmosphere; but no fact has yet been demonstrated that this possibility has been recognized. It might be added that the well-known longevity of gravediggers and their general immunity from the zymotic diseases is a disproof of the theory.

Immunization Against Cholera.—Additional proof of the etiological significance of the cholera vibrio and of the feasibility of immunization against Asiatic cholera is furnished in

the experimental work of the pathologist, Sabolotny. He finds that a species of rodent (*Spermophilus guttata*), common in South Russia, is highly sensitive to the cholera bacillus. This animal is readily infected by the cholera culture whether introduced subcutaneously, intraperitoneally, or by the mouth, and whether with or without Koch's preliminary treatment by soda and opium, although this treatment makes infection more certain. It may also be rendered immune by the previous administration of attenuated cholera cultures by the mouth; it then survives the otherwise fatal dose of cholera even when given in conjunction with soda. No doubt, among the numerous species of the *Spermophilinæ* which abound in this country—the ground squirrels, prairie dogs, gophers, etc.—there may be found one or more as useful as the *S. guttata* for the repetition of these experiments by American bacteriologists.

The Epidemics.—Cholera is reported to be general in Canton, and a serious epidemic of a disease from which over 7,000 deaths have occurred since the middle of April, is prevailing in Hong Kong. The disease is said to be similar to the plague which decimated the province of Hochow in 1883-4; but it is thought not unlikely to be the same disease so prevalent in Canton. Cable dispatches report cholera "raging" in the districts of Plock, Radom and Petrokoff in Russian Poland. As a precaution against the importation of the disease into Prussia, an order has been issued to compel all Russians entering Prussian territory to pass through Illowo on the frontier, where the strictest sanitary regulations are enforced.

Between Jan. 1, 1894, and May 31, ult., there were 1,733 cases of smallpox in Chicago, with 501 deaths—a mortality of 28.8 per cent. The monthly increase in the number of cases was as follows: January, 128 cases; February, 233; March, 305; April, 544; May, 529. During the first sixteen days of May there were 398 cases—a daily average of 24.8 new cases; during the remaining fifteen days of the month there were 131 cases—a daily average of 8.7 new cases. The epidemic may be said to be at an end for the season, although four or five new cases are still reported daily.

The Infectious Diseases.—With the object of securing a more accurate nomenclature for the infectious and contagious diseases, Dr. W. H. Thomas, at a recent meeting of the New York Academy of Medicine, offered the following classification:

1. Infectious diseases are due to the presence of their respective living microörganisms in the body.
2. Infectious diseases are divisible into three classes: *a*, communicable; *b*, non-communicable; *c*, septic.
3. The communicable diseases are those whose origin is from an animal body—examples of which are smallpox, Asiatic cholera and tuberculosis.
4. The non-communicable infectious diseases are those whose origin is not from an animal body, but from a place or thing—examples of which are ague, yellow fever and miasmatic diseases in general.
5. The communicable diseases are divisible into two classes according to the ordinary modes of their communication: *a*, into the contagious; *b*, into the non-contagious communicable diseases. The contagious communicable diseases are those in which simple proximity to the sick is sufficient to communicate the infection—examples of which are scarlet fever, measles, smallpox, diphtheria, mumps, etc. Isolation of the sick in these cases is, therefore, needful to prevent infection. The non-contagious communicable diseases are those in which the communication is not by simple proximity to the sick, but through intermediate means of communication. Isolation of those sick with them, therefore, is neither needful nor effective in comparison with measures directed against intermediate means of infection—examples are typhoid fever, Asiatic cholera and tuberculosis.
6. The septic infectious diseases are those in which infection is introduced through a wound or abrasion—examples are erysipelas, hydrophobia, tetanus, etc.

This is a fairly commendable attempt at securing greater accuracy in classification, but it can hardly be called perfect. Dr. Thomas, for example, would scarcely, on reflection, classify all forms of erysipelas as "septic," caused by the "introduction of the infection through a wound or abrasion." This takes account only of surgical or traumatic erysipelas, and entirely omits from classification that form of the disease of greatest interest to the epidemiologist, to-wit, the idiopathic or medical form—the form which more frequently than the traumatic tends to become epidemic through faulty hygienic conditions and surroundings. This form clearly belongs in "class *a*, communicable;" and for purposes of sanitary administration, in the "contagious" subdivision of this class.

MISCELLANY.

Resignation of Dr. Edwards.—Dr. Joseph F. Edwards has resigned his membership in the Pennsylvania State Board of Health.

Practice in Switzerland.—In theory at least, the prohibition of the practice of medicine in Switzerland without the government license, is so strict that a physician without such license is forbidden to prescribe for his own wife during a temporary sojourn in that country.

An Abiotic Region.—Analyses of the air, water and soil of the Spitzbergen group of islands in the Arctic region show an extraordinary poverty of bacterial life. While the air of the streets of Paris contains an average of 51,000 bacteria to the cubic meter that of the Arctic Sea contains only 3 to the meter; and the water of Spitzbergen is not only devoid of any pathogenic microörganisms, but is also entirely free from any kind of bacilli.

The Deadly Decimal Point.—Our esteemed contemporary, the *British Medical Journal*, is another victim of the proofreader's hostility to the decimal point, although we are the actual sufferer. In a recent issue of our British namesake, there appears the following: "There is (says the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION) an average increment of nearly 6,000 new home-made medical practitioners every year, and, while the population of the United States increased 248 per cent. during the decade 1881-90, the number of newly-graduated doctors increased over 50 per cent, in the same period." The insertion of a point before the figure 8 in the percentage of increase of population will relieve us of the charge of indulging in "Yankee bounce" as to our growth, at the same time that it will make clear the lesson of the figures, *i.e.*, that our increase in the number of newly-made doctors is more than twice as great as the increase in population—over 5 per cent. per annum for the former and less than 2.5 per cent. per annum for the latter.

Circumcision Specialists.—In England, where the custom of announcing births in the public prints obtains much more largely than in this country, the proud parents are promptly deluged with samples and circulars of every article pertaining to infant life—from soaps to sucking-bottles, from puff powders to perambulators, from infant foods to physics. The latest development in this line of infant industries is the "circumcision specialist," whose services are straightway offered to the male infant even before he has voided his meconium. The *British Medical Journal* has received the circular of one of these preputial operators, who urges the importance of the youngster being circumcised without delay and offers to do the business in half a minute in an ordinary case and within a minute even in the most difficult. Among the moral and physical reasons for its performance

the circular somewhat confusingly says: "Every Circumcised person have always been so hardy and thereby escaping obscure nervous disorders, the facts of which are acknowledged by highest medical authorities." "What are the benefits derived therefrom? Predisposition to and Exemption and Immunity from disease." Our British namesake treats the subject *au serieux* and counsels the "proud father, pestered at his solitary breakfast with pamphlets of this description," to "appeal at once to his doctor;" but strangely enough omits any warning of the danger of a careless operator throwing away the wrong piece.

An Anti-Typhoid Precaution; Clean Water for Milch Cows.—The occurrence of typhoid fever at Montclair, New Jersey, has been a great stimulus to a sanitary revival in the "first class suburbs" of New York City. A letter from one of the residents, however, says that the health committee have done their inspection work creditably and have reduced the sickness rate considerably. The dairies of the vicinage have been overhauled and cleaned, but nothing has been done to improve the water supply of the cows; that is to say, the writer holds that in times of fever prevalence the water given to the milch cows should be above suspicion; just as in times of variolous prevalence no person should evade the available precaution of re-vaccination. In non-typhoidal times, this somewhat extraordinary caution as to the water-supply to dairies may be slighted, perhaps, without detriment, but in fever times it must not be neglected. We know of dairies that are punctilious in selling an unadulterated product and that use an abundance of water in the cleansing of all their utensils, cans, etc., and yet they are not watchful as to water and drinking buckets that are supplied to the animals. There is no doubt in our own mind that the point is well taken. The sources of the water supply for milch cows should be inspected, and the dangers of fever importation guarded against.

Philadelphia Notes.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.—The fiftieth annual meeting of the Medico-Psychological Association, formerly known as the Association of Medical Superintendents of American Institutions for the Insane, was held in Philadelphia at the Continental Hotel. The President, Dr. John Curwen, of the Woman's State Hospital of Pennsylvania, called the meeting to order on the morning of May 15, and opened the proceedings with an admirable address. Many representative alienists were present from different parts of the country, and valuable papers were read and discussed. Dr. S. Weir Mitchell by invitation delivered an address, which gave a neurologist's view of the present management of hospitals and the treatment of the insane, and presented suggestions of an ideal institution. Dr. Mitchell was subsequently elected an honorary member of the Association.

The following officers and members were elected:

President, Dr. Edward M. Cowles, Medical Superintendent McLean Hospital, Somerville, Mass.

Vice-President, Dr. Richard Dewey, Chicago, Ill.

Secretary and Treasurer, Henry M. Hurd, the Johns Hopkins University, Baltimore, Md.

Auditor, Dr. A. R. Moulton, Assistant Physician Pennsylvania Hospital for the Insane.

Councilors for three years: Drs. John B. Chapin, Superintendent Pennsylvania Hospital for the Insane; Peter M. Wise, Medical Superintendent of St. Lawrence State Hospital, Ogdensburg, N. Y.; Frank H. Clarke, Medical Superintendent Eastern Kentucky Lunatic Asylum, Lexington, Ky.; A. F. Kilbourne, Medical Superintendent Rochester State Hospital, Rochester, Minn.

A Dearth of Medical Men in Southwestern Asia.—The Bahrein Islands, in the Persian Gulf, with a population of 50,000, have no physician, except when a certain American missionary, with some medical training, is enabled to transiently pass over to them from the mainland. Native quackery has full sway and is cruel in the extreme. Dentistry is practiced with wedges and hammers and crude tongs; and molten lead is dropped into a hollow tooth as a cure for toothache. It is not at all wonderful that our American missionary, whose station is about three hundred miles distant, should express the belief that he has won scores of friends by less painful methods. There are at least five other places in and around the western and northerly shores of the Persian Gulf where a man with some knowledge of modern medicine would have a virtual monopoly; among which are Busrah, Hassa and Kateef. A man with qualifications in surgery would probably soon have business enough to employ his whole time in surgical work. Fever is prevalent on the mainland and is a disabling feature to strangers whose original home has been non-malarial. The dengue, or "dingo fever" is pretty sure to attack all visitors from northerly climates. Even those who come down from Persia find the Arabian climate trying, and find it to their advantage to resort to Busrah and other spots near the mouth of the Euphrates. An American, who went on a tour to the westward from the Bahrein Islands, writes graphically of some of the attractive scenes he passed through: "The tour lay over long stretches of desert, interspersed with rich and fertile tracts. One day, about noon, we sighted the palm forests that surround Hofhoof and give it, Palgrave says, 'the general aspect of a white and yellow onyx chased in an emerald rim.' At sunset we went on to Menazeleh, a distance of about three miles, through gardens and rushing streams of tepid water. The next morning early we again rode though gardens and date orchards half visible in the morning mist. At 7 o'clock the mosques and walls of Hofhoof appeared right before us, as the sun lifted the veil; it was a beautiful sight.

"This is the gateway to the land of Nedj, or Central Arabia. I had no trouble after I got here. The road was long and I had some difficulty about food. Here is a paradise. Palgrave's descriptions are not exaggerated at all. Rivers of water, and dates, and all kinds of fruit. Many people whom I knew from Bahrein. Much kindness was shown me by the Pasha, and no objection so far to sale of books in a quiet way. God be praised! In fact, if I knew you had a good man at Bahrein I would not return. The Dowla has made me an offer as assistant doctor, 'beladeeje.' I plan to leave, however, in a few days, but have already promised to come back with lots of medicine and books. We ought to get a shop here."

The Persians, occupying the lands north of the Gulf, are overrun with superstition. If they have one educated physician per million of their population, that will be the best that can be enumerated. Their main reliance is on "the stars," rather than on science.

No important affair is undertaken without the advice of an astrologer. In taking a dose of medicine the Koran is referred to at haphazard, as to whether it shall be taken or not, and then the astrologer consulted for a fortunate time.

In the Persian system of medicine all diseases are cold or hot; all remedies ditto. A hot disease requires a cold remedy, and *vice versa*.

Practical Application of Bacteriology to Health Board Work Regarding Diphtheria.—The following paragraphs are taken from a Circular of Information issued by the Brooklyn, New York, Department of Health. The date of the circular is March 1, 1894, and its prime object is to proffer aid to the medical profession in respect to the diagnosis of diphtheria. The name of its author is Dr. Ezra H. Wilson, who is the newly appointed head of a newly instituted department, namely the Chief of the Bureau of Bacteriology, Pathology and Disinfection, having its office at the Hoagland Laboratory, in the city above named. The credit for the establishment of this new bureau is to be ascribed to Health Commissioner, Dr. Z. Taylor Emery, who took office in February of the current year.

The information conveyed by this circular will be acceptable to all officers of health and others who are studying the practical side of the new methods of diagnosis by laboratory research. The cost to the Department of the tube, swab and the little wooden box containing them, is somewhat less than ten cents; while the cost of collection of the culture-tubes from the nine or ten named stations, at drug stores, will be as much more.

Recent bacterial investigations have shown that a considerable proportion of the cases of pseudo-membranous and exudative inflammations of the throat and upper air passages, commonly considered as diphtheria, and having the anatomic appearances found in diphtheria, are not true, but

false diphtheria. On the other hand, it has been shown that a considerable proportion of the cases which are apparently false diphtheria prove, on bacterial examination, to be true diphtheria.

While in true diphtheria the mortality is very high, and the danger of transmission to others is great, in false diphtheria the mortality is low, and the danger of infection slight.

The differential diagnosis between true and false diphtheria can be made by bacteriologic examination in twelve hours, while without this the differentiation is difficult or impossible.

The Health Department is now prepared to make use of bacterial cultures for diagnosis in all cases of suspected diphtheria occurring in the city, and desires that in every case either the physicians themselves should make the cultures, or should authorize an inspector to make them. They should be made in every suspicious case at the earliest possible moment, for during convalescence the specific organisms often disappear from the throat, and the full benefit of a positive diagnosis is not obtained unless it is made early in the disease.

The cultures are made by gently rubbing a cotton swab against the throat, and then drawing it over the surface of the culture medium. When the physician himself desires to make the culture (and this is usually the better plan, for it can be done earlier and is more agreeable to the family) he can obtain, free of cost, a culture tube and swab, and simple directions for their use, at any one of the druggists whose addresses are given below. After the culture is made, the tubes are to be returned to the druggist from whom they were obtained. The tubes will be collected by the Department every day. In cases where the culture has not been made by the attending physician, the medical inspector will make one, unless for any reason the physician requests that none be made when he notifies the Department of the case.

The diagnosis will be ready the following afternoon, and can be obtained by the physician immediately by telephoning to the Laboratory, or when this is not done, he will be notified by mail. Cases which prove to be false diphtheria will not be visited by the Health Department inspectors. Cases, on the other hand, which prove to be true diphtheria, will be subjected to the rules and regulations covering contagious diseases.

The bacilli usually disappear from the throat shortly after the disappearance of the exudate, but later investigations have shown that as long as from three to five weeks may elapse before their entire disappearance. In these cases the patients, although apparently well, are capable of transmitting the disease.

It is important, therefore, in order to be able to decide with certainty the time when a patient is free from contagion, to have second, third, fourth, etc., cultures made at intervals of about four days. This applies only to cases occurring in boarding houses, hotels and tenement houses—not to those in private houses.

THE PUBLIC SERVICES.

Army Changes. Official list of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from May 26, 1894, to June 1, 1894.

First. Lieut. WILLIAM H. WILSON, Asst. Surgeon, now on duty at Ft. Leavenworth, Kan., will proceed at once to Camp Merritt, Mont., and report for assignment to temporary duty at that post.

Marine-Hospital Changes. Official list of changes of stations and duties of medical officers of the U. S. Marine-Hospital Service, for the five weeks ended May 26, 1894.

Surgeon R. D. MURRAY, to proceed to Brunswick, Ga., for special duty, April 30, 1894. To proceed to Waynesville, Ga., as inspector, May 17, 1894.

Surgeon W. H. H. HUTTON, detailed for duty as inspector of quarantine stations, April 27, 1894.

Surgeon J. B. HAMILTON, granted leave of absence for three days, May 14, 1894.

Surgeon J. M. GASSAWAY, granted leave of absence for fifteen days, May 12, 1894. Leave of absence extended five days, May 26, 1894.

Surgeon G. W. STONER, to inspect Cape Charles Quarantine Station monthly, April 27, 1894. Granted leave of absence for thirty days, May 18, 1894.

Surgeon JOHN GODFREY, to represent the Service at meeting of American Medical Association at San Francisco, Cal., May 11, 1894.

Surgeon FAIRFAX IRWIN, to proceed to Berlin, Germany, for special duty, May 5, 1894.

Surgeon H. R. CARTER, granted leave of absence for three days, May 3, 1894. To proceed to Key West Quarantine for temporary duty, May 4, 1894.

P. A. Surgeon C. E. BANKS, granted leave of absence for five days, May 1, 1894.

P. A. Surgeon D. A. CARMICHAEL, to proceed to St. Louis, Mo., for temporary duty, May 15, 1894.

P. A. Surgeon C. T. PECKHAM, to proceed to San Francisco Quarantine Station for duty, May 17, 1894.

P. A. Surgeon A. H. GLENNAN, to proceed to Wilmington, Del., for special temporary duty, April 25, 1894.

P. A. Surgeon J. H. WHITE, to inspect quarantine stations, April 27, 1894. Granted leave of absence for seven days, April 29, 1894. Granted leave of absence for twenty-three days, May 4, 1894.

P. A. Surgeon W. D. BRATTON, to report at Bureau, and then to proceed to Delaware Breakwater Quarantine for duty, May 19, 1894.

P. A. Surgeon G. M. MAGRUDER, to proceed to Key West Quarantine station for duty, May 15, 1894.

P. A. Surgeon J. J. KINYOUN, to proceed to Wilmington, Del., for special temporary duty, April 26, 1894. Detailed as chairman of board for physical examination of officer, Revenue Marine Service, April 30, 1894. Detailed to attend annual meeting, State Board of Health of North Carolina, May 11, 1894. To inspect property at Wilmington, N. C., May 14, 1894.

P. A. Surgeon R. M. WOODWARD, to proceed to Chicago, Ill., for special duty, May 7, 1894.

P. A. Surgeon G. T. VAUGHAN, detailed as recorder of board for physical examination of officer, Revenue Marine Service, April 30, 1894.

P. A. Surgeon J. B. STONER, to inspect quarantine ports, April 26, 1894.

P. A. Surgeon J. C. PERRY, to assume command of Service at Norfolk, Va., May 4, 1894.

Asst. Surgeon G. B. YOUNG, to proceed to Key West, Fla., for duty, May 15, 1894.

Asst. Surgeon B. W. BROWN, to proceed to Pittsburg, Pa., for duty, April 27, 1894.

Asst. Surgeon M. J. ROSENAU, to proceed to Boston, Mass., for duty, April 23, 1894.

Asst. Surgeon L. E. COFER, to proceed to San Diego, Cal., as inspector, and to assume command of the Service after June 30, April 26, 1894.

Asst. Surgeon J. M. EAGER, to proceed to New Orleans, La., for duty, May 16, 1894.

Asst. Surgeon J. A. NYDEGGER, to proceed to Savannah, Ga., for duty, April 28, 1894.

Asst. Surgeon EDGAR STRAYER, to report for duty on revenue bark "Chase," April 28, 1894.

Asst. Surgeon J. H. OAKLEY, to rejoin station, San Francisco, Cal., May 16, 1894.

PROMOTIONS.

Asst. Surgeon G. B. YOUNG, commissioned as Passed Assistant Surgeon, May 25, 1894.

Asst. Surgeon W. G. STIMPSON, commissioned as Passed Assistant Surgeon, May 25, 1894.

APPOINTMENTS.

ARTHUR R. THOMAS, of Illinois, commissioned as Assistant Surgeon, May 25, 1894.

HENRY W. WICKES, of Maryland, commissioned as Assistant Surgeon, May 25, 1894.

HUGH S. CUMMING, of Virginia, commissioned as Assistant Surgeon, May 25, 1894.

LETTERS RECEIVED

(A) Antikamnia Chem. Co., St. Louis, Mo.; Arnold, W. F., Navy Yard, Mare Island, Cal.; Albright, J., Grand Rapids, Mich.; Anderson, Olive, Andover, Ill.

(B) Baxter, E. H., Sharon, Vermont; Baughman, J. W., Flat Lick, Ky.; Bunce, Wm. C., Oberlin, Ohio; Baxter, E. K., Boston, Mass.

(C) Coffin, C. E., North Loup, Neb.; Cleaves, M. A., New York, N. Y.; Canfield, Wm. B., Baltimore, Md.

(F) French Pinckney, St. Louis, Mo.

(G) Girard, Alfred C., Fort Sheridan, Ill.; Graham, Douglas, Boston, Mass.

(H) Hay, Thomas, Philadelphia, Pa.; Hummel, A. L., Philadelphia, Pa.; Henchman, J. G., St. Louis, Mo.; Hubbell, Alvin A., Buffalo, N. Y.; Haldenstein, J., New York, N. Y.

(J) Jay, F. W., Chicago, Ill.; Jelks, Jas. T., Hot Springs, Ark.

(K) Kingsbury, D. W., Nanticoke, Pa.

(L) Listol Chemical Co., Chicago, Ill.; Lowrie, W. M., Chicago, Ill.; Long Island College Hospital, New York, N. Y.

(M) Murphy, J. B., Chicago, Ill.; McGahan, C. F., Aiken, S. C.; Marchand, Chas., New York, N. Y.

(N) New York Post Graduate Med. School, New York, N. Y.

(P) Playter, Edward, Ottawa, Canada; Preston, John, Terrell, Texas; Paquin, Paul, Lebanon, Mo.

(R) Reinking, H., Sheboygan, Wis.

(S) Small, Sidney, I., Saginaw, Mich.; Sauer, Frederick N., Racine Wis.; Stearns, F. & Co., (2) Detroit, Mich.; Stephens, N. A., Kansas City, Mo.; Steckert, G. & Co., New York, N. Y.; Sanders, T. B., Washington, D. C.; Smith, Allen J., Galveston, Texas; Strong, O. C., Colden, N. Y.

(T) Thomas & Grow, Buffalo, N. Y.; The Drevet Mfg Co., New York, N. Y.; Treat, E. B., New York, N. Y.

(V) Vance, A. J., Harrison, Ark.

(W) Waugh, W. F., Chicago, Ill.; Wilson, B. F., Velasco, Texas; Whitford, Wm., Chicago, Ill.

PAMPHLETS RECEIVED

The Evolution of Empiricism in the District of Columbia. By J. S. McLain, M.D.

Buffalo Academy of Medicine—Section on General Medicine—Report of the Committee on Tuberculosis.

Relation of the Kindergarten to the Public School. By E. Stuver, M.D.

Electricity in the Treatment of Chronic Prostatitis, and other Conditions Underlying Impotence in Men. By G. Betton Massey, M.D.

Certain Erroneous Principles and Methods in Gynæcology. By G. Betton Massey, M.D.

Fracture of the Skull; Trephining; Retro-Antero-grade Amnesia; Recovery; Death one Month Subsequently from other causes; Autopsy. By E. J. A. Rogers, M.D., and J. T. Eskridge, M.D.

Conservatism in Accidental Surgery. By E. J. A. Rogers M.D.

Guaiacol as a Topical Application in the Treatment of Acute Tonsillitis. By J. H. Raymond, M.D.

The Influence of Dress in Physical Decadence of American Women. By J. H. Kellogg, M.D.

Duplication of the Spinal Cord, as a Result of Post-mortem Injury. By E. D. Bondurant, M.D.

Graphic Methods of Recording Diseased Conditions of the Lungs, and a new form of Pneumograph. By J. H. Kellogg, M.D.

New Method of Operating for Hemorrhoids. By J. H. Kellogg, M.D.